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ACTIVITIES FOR NATURAL DISASTER REDUCTION

International Decade for Natural Disaster Reduction

Report of the Secretary-General of the Conference

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INTRODUCTION

1. Natural disasters, so common in many parts of the world, strike regardless of national boundaries. Although the primary response - and responsibility - rests with national or local authorities, international action is called for when national capacities are exhausted and overwhelmed by events.

2. The international community has over the years developed mechanisms to respond to natural disasters. At the outset, natural disasters were perceived as being sudden and violent acts of nature disrupting human lives, causing death and destruction, loss of property and wealth - individually and collectively. Emphasis was placed on assisting governments with certain aspects of disasters, such as relief coordination and reconstruction, preventing epidemics caused by natural disasters from spreading, and attempting to assure that schools, housing and other types of construction are built to hazard-resistant standards. The approach was focused either on the emergency relief or on the scientific, technical and engineering aspects of disaster prevention.

3. In 1970, one of the worst natural disasters in history struck the Bay of Bengal: a violent tropical cyclone rushed up the bay, pushing before it a massive tidal wave that swept into Bangladesh, killing between a quarter and half a million people. The General Assembly requested the Secretary-General to set up a permanent disaster management mechanism. The Office of the United Nations Disaster Relief Coordinator (UNDRO), now the Department of Humanitarian Affairs (DHA), was established by the General Assembly in resolution 2816 (XXVI) of 17 December 1971. The resolution for the first time called for an integrated approach to disaster management in which disaster relief and prevention - or "reduction" as it is also referred to in the present context - formally became complementary parts of a United Nations programme.

4. Since 1971, it has become evident that natural disasters not only cause loss of life and property, but that they actually impede development. Repeated disasters only serve to compound the problem. To sudden natural disasters was added the spectre of slow-onset disasters, particularly drought followed by famine, and the displacement of enfeebled populations towards emergency feeding centres.

5. Disaster relief alone cannot overcome the overall problem posed by natural disasters. The importance of disaster management, information collection, dissemination and communication, the coordination of international action, including prevention, mitigation and preparedness, have gained in importance apace with advances in knowledge, awareness and technology. Effective disaster reduction is becoming a realistic goal. Reducing the frequency and magnitude of disasters must become part of the development process. A study based on existing sources of disaster information, and conducted by the secretariat for the International Decade for Natural Disaster Reduction, describes the rising disaster damage/loss trends over the past 30 years, and is annexed to the present report (A/CONF.172/4/Add 2).

I. INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION

A. Proclamation of the International Decade for Natural Disaster Reduction by the General Assembly

6. By the end of the 1980s, at the initiative of prominent scientists, the General Assembly concluded that a more concerted international effort was required to slow down and eventually prevent natural disasters. The three main factors which led to the launching of the International Decade for Natural Disaster Reduction (IDNDR) were: rapidly increasing disaster losses rising apace with population growth and urbanization; the fact that such losses compromised sustainable economic and social development, and added to environmental degradation; and the fact that proven methods for greatly reducing such losses were not being applied widely enough, especially in the developing countries.

7. Following the first General Assembly resolution concerning the designation of the 1990s as the International Decade for Natural Disaster Reduction (resolution 42/169), the Secretary-General in 1988 established an ad hoc group of scientists which formulated the programme framework for the decade, and also adopted the Tokyo Declaration. This led to the establishment of IDNDR to promote a significant improvement in the prevention and mitigation of disasters by the end of the twentieth century.

8. The Secretary-General also established an Inter-Agency Steering Committee composed of relevant organizations of the United Nations system to coordinate action in the Decade. The Inter-Agency Working Group (IAWG) of the Steering Committee has played an important role. Representatives of non-governmental and scientific organizations have joined the United Nations agencies in the IAWG.

9. Thus, in 1989 the General Assembly proclaimed the International Decade for Natural Disaster Reduction at its forty fourth session (resolution 44/236 of 22 December, 1989). An International Framework of Action for the Decade, approved in annex to the resolution, established the objective and goals, policy measures to be adopted by member States; action to be taken by the United Nations system; organizational arrangements during the Decade; financial arrangements; and the review process.

B. International Framework of Action

1. Objective and goals of the Decade

10. The objective of the Decade is to reduce through concerted action, especially in developing countries, the loss of life and property and socio-economic disruption caused by natural disasters.

11. The goals of the Decade are:

(a) To improve the capacity of countries to mitigate the effects of natural disasters;

(b) To devise appropriate guidelines for applying existing scientific and technical knowledge;

(c) To foster scientific and engineering endeavours aimed at closing gaps in knowledge;

(d) To disseminate existing and new technical information;

(e) To develop measures for the assessment, prediction, prevention and mitigation of natural disasters through programmes of technical assistance and technology transfer, demonstration projects and public information and training.

2. Policy and strategy

12. To reach the objective and goals of the Decade, the governments concerned have been requested:

(a) To formulate national disaster mitigation programmes and to integrate these in national development plans;

(b) To participate during the decade in concerted international action and establish national committees in cooperation with the relevant scientific and technological communities;

(c) To encourage local authorities to take appropriate steps to mobilize public and private support;

(d) To increase public awareness of risk and its consequences;

(e) To pay due attention to the health aspects of natural disasters;

(f) To improve early access to emergency supplies;

(g) To keep the Secretary-General of the United Nations informed of all developments, nationally and internationally.

13. From the outset, institutions - financial, scientific and technological, non-governmental, national and international - were encouraged to support and participate in the activities of the Decade. The organs, organizations and bodies of the United Nations were urged to accord priority to natural disaster reduction in all its aspects and phases. The formulation and implementation of public information programmes aimed at raising public awareness of the benefit of disaster reduction were emphasized. Resident Coordinators and the field representatives of the United Nations system were requested to work closely with governments to achieve the objective and goals of the Decade. Similarly, the regional commissions were requested to play their role, considering that natural disasters often transcend national boundaries.

3. Organization of the Decade

14. Concerning organizational arrangements for the Decade, the Secretary-General established a Special High-Level Council (SHLC), consisting of a limited number of internationally prominent persons to provide him with general advice on the Decade, take appropriate action to promote public awareness, and mobilize support.

15. The Secretary-General also established the Scientific and Technical Committee (STC) of about 25 experts, selected in consultation with their governments. The role of STC is to develop overall programmes to be taken into consideration in bilateral and multilateral cooperation, to evaluate the activities of the Decade, and to make recommendations in an annual report to the Secretary-General.

16. The Secretary-General established a small Decade secretariat at the United Nations Office in Geneva, to be financed from extra-budgetary sources. It is responsible for the day-to-day coordination of the Decade's activities, and provides substantive support to the SHLC, STC and other bodies.

17. The secretariat's work programme, has been organized around a number of themes that are central to the International Framework of Action:

(a) Regional activities; national IDNDR committees;

(b) Public information; information dissemination, technology and systems;

(c) Economic aspects of disasters; the private sector;

(d) International demonstration projects and other IDNDR projects.

18. The Decade secretariat has become an integral part of the Department of Humanitarian Affairs (DHA), successor to the former Office of the United Nations Disaster Relief Coordinator (UNDRO). The Decade secretariat and the Disaster Mitigation Branch of DHA have merged to strengthen disaster reduction and mitigation programme development. The secretariat continues to exercise its function within the International Framework of Action.

19. The General Assembly, in resolution 44/236, recommended that extra-budgetary resources be provided for the implementation of the Decade's activities and that, therefore, voluntary contributions from governments, international organizations and the private sector be strongly encouraged. To this end a Trust Fund for IDNDR was established by the Secretary-General. Thanks to committed donors and active support in kind from the specialized agencies, the Decade secretariat and its activities have moved forward, though often precariously.

20. Lastly, concerning the organization of the Decade, it was decided that the Economic and Social Council, during its second regular session of 1994, would carry out a mid-term review of the implementation of the International Framework of Action of the Decade. This review follows the World Conference on Natural Disaster Reduction.

4. Targets for the Decade

21. As recommended by STC, the General Assembly in resolution 46/149 endorsed the targets for the Decade:

22. By the year 2000, all countries, as part of their plans to achieve sustainable development, should have:

(a) Comprehensive national assessments of risks from natural hazards, with these assessments having been taken into account in development plans;

(b) Mitigation plans at national and/or local levels that include long-term prevention, preparedness and community awareness;

(c) Ready access to global, regional, national and local warning systems, and the ability to ensure a broad dissemination of disaster warnings.

23. In the same resolution, the General Assembly, for the first time, endorsed the convening of a world conference of representatives of national committees for IDNDR, bringing together a wide range of participants, and contributing to the mid-term review of the Decade.

II. PROGRAMME DEVELOPMENT AND IMPLEMENTATION

24. There have been varying degrees of progress in the activities of the Decade, depending on the resources available and the capability of IDNDR partners. However, expectations generated by convening of the World Conference have influenced the activities of the Decade to a growing extent. The present report presents an overview of programme developments within the International Framework of Action.

A. Special High Level Council and Scientific and Technical Committee

Special High Level Council

25. The Special High Level Council (SHLC) was established by the Secretary-General in 1991. He convened its first meeting in October of that year in New York. The Council is composed of 10 distinguished members. At its first meeting, in the presence of the Secretary-General, SHLC adopted the New York Declaration.

26. The Secretary-General convened the second session of SHLC in January 1993, in New York, to review the progress of the Decade and to obtain advice on the future direction of Decade activities. At this session, the Government of Japan formally issued its invitation to hold the World Conference on Natural Disaster Reduction in Yokohama, Japan, from 23 to 27 May, 1994. The Council adopted a 12-point Plan of Action leading to the World Conference. The Plan of Action followed consultations with key participants in the activities of the Decade. It emphasized the need to build bridges between governments and international organizations, including financing institutions such as the World Bank and the scientific and technical communities. The Council concluded that there should be a ministerial session at the World Conference, so as to obtain mobilization at the highest political

level for the second part of the Decade. The Council emphasized that reducing vulnerability is a major goal; it also drew the attention to linkages between natural and man-made disasters, as well as mitigation as a prerequisite for sustainable development.

Scientific and Technical Committee

27. The Scientific and Technical Committee was established in 1990, and held its first meeting in Bonn in March, 1991. Twenty-five experts (scientists, journalists, disaster managers etc.) from 25 countries were named to STC. At the Bonn meeting the targets for the Decade were developed along with its programme and framework. A number of steps were adopted to promote the formation and work of national committees and focal points for the Decade. Criteria were adopted for designating international projects to demonstrate the kinds of scientific and technical activities that could be undertaken during the Decade, and a first set of demonstration projects was selected. These included training, research and extension projects proposed by a number of scientific associations and the United Nations system. A public information programme to help promote awareness of the potential of disaster reduction, centred upon the International Day for Natural Disaster Reduction (also known as IDNDR Day) in October of each year, was agreed upon although funding for this programme was, and remains, a problem. STC welcomed the Osservatorio Vesuviano's willingness to sponsor the Decade's newsletter, Stop Disasters. The first issue was published in March 1991.

28. The second STC meeting was held at Guatemala City in September 1991, in conjunction with a Latin American regional IDNDR meeting organized by the Pan-American Health Organization (PAHO). The Committee continued to encourage national efforts, and considered its first report to the General Assembly. In this report, STC reaffirmed the targets and programme of the Decade, particularly the need to strengthen national committees and programmes. The work programme recommended by STC for the Decade secretariat was endorsed by the 10 distinguished members of the Special High Level Council at its first meeting held in New York in October 1991, and adopted by the General Assembly (resolution 46/149) in December 1991.

29. The STC and the Latin American Regional IDNDR meeting drew attention to the need to emphasize the linkages between natural disasters, environmental degradation and sustainable development (Guatemala Declaration), in preparation for the United Nations Conference on Environment and Development (UNCED) at Rio de Janeiro in June 1992. This issue has been repeatedly emphasized by STC in its reports.

30. Members of STC subsequently participated in the meeting of the Organization of African Unity (OAU) at Addis Ababa in April 1992, to promote and coordinate the action of African countries in reducing disasters. They also did so at a comparable PAHO/Organization of American States (OAS) meeting for the Caribbean in Kingston, Jamaica, in May 1992. The pace of national IDNDR meetings was quickening, as were the number of IDNDR co-sponsored scientific and technical meetings worldwide. STC continuously emphasized the fact that such initiatives should lead to practical disaster reduction measures, nationally and regionally.

31. The main objectives of the third session of STC, held at Geneva in March 1992, in addition to continuing efforts to encourage and support national activities, were to develop a plan for a proposed World Conference to be held in 1994, and to provide guidance to the IDNDR secretariat on the development of a programme on the economic benefits of disaster reduction. The latter was of growing importance since it was agreed that clear evidence was needed of the economic benefits of disaster reduction, and that the proof of such benefits was the key to convincing national policy makers and agencies to include disaster reduction in development plans. The World Conference was not to be a purely scientific event, but one where policy makers could interact, with provision for ministerial level involvement.

32. The fourth session of STC was held in New Delhi in February 1993, at the invitation of the Government of India. This gave members of the Committee an opportunity to learn from, and interact with, disaster mitigation specialists from Asian and Pacific countries. At this meeting, the STC Technical Preparatory Group for the World Conference was established.

33. The fifth session of STC was held at Geneva in November 1993. This session was predominantly devoted to giving final shape to the substance of the World Conference's programme, in coordination with the organizations that have assumed major responsibility for organizing technical sessions and regional reports.

B. Inter-Agency coordination

Inter-Agency Working Group

34. The Inter-Agency Working Group (IAWG) of the IDNDR Steering Committee, established by the Secretary-General of the United Nations in 1988, has continued to coordinate the Agencies' action programmes for the Decade Framework. Sixteen meetings of the IAWG have been held since the establishment of the Committee. In 1993 and 1994, the IAWG met four times in preparation for the World Conference on Natural Disaster Reduction. In addition to the traditional participation of the United Nations agencies, a number of non-governmental and scientific organizations such as the International Federation of Red Cross and Red Crescent Societies (IFRC), the International Council of Scientific Unions (ICSU), the World Federation of Engineering Organizations (WFEO), joined the IAWG, and have assumed substantial responsibility in organizing the scientific and technical programme of the World Conference, as mentioned above. All member organizations of the IAWG will be reporting on their IDNDR-related programmes in separate information documents at the World Conference. The IAWG's contribution to the Decade and the Conference is well illustrated in the Conference's programme.

Disaster mitigation

35. The activities of DHA in disaster mitigation and prevention fall into three main categories, namely:

(a) At the global level, strategy development for disaster reduction and mitigation, promotional activities to spread knowledge of the most

effective technical and management methods through case history analyses, manuals, conference presentations, workshops and related promotional and training activities;

(b) At the national and subregional level, to assist authorities in identifying the highest risks, to formulate and implement mitigation programmes, and to set up institutional structures which give permanent attention to such activities;

(c) At the local level, to establish working mechanisms with local authorities to provide guidance on step-by-step disaster mitigation measures for at least one example of each type of high-risk scenario.

36. Current DHA mitigation activities are based on close collaboration and coordination with the United Nations and other organizations and donors. DHA provides technical and professional support for programme development and project implementation. These activities include:

(a) Argentina: Volcanic and technological risks;

(b) Bangladesh: Cyclone mitigation measures;

(c) Botswana: National disaster plan;

(d) Colombia: Integrated, multi-sectoral mitigation programme;

(e) Ecuador: Multi-sectoral programme;

(f) Egypt: Guidance with new national mitigation programme;

(g) Guinea: Strengthening of disaster management capabilities;

(h) Malawi: Mitigation project formulation;

(i) Nepal: Dam break scenario;

(j) Peru: Volcano, earthquake and tsunami risk reduction;

(k) Saudi Arabia: Advice to civil defence;

(l) South Pacific: Disaster preparedness;

(m) Vietnam: Action plan for water disasters;

(n) Mediterranean Region: Cooperative project for seismic risk reduction (SEISMED);

(o) Latin America: Subregional cooperation in disaster mitigation.

C. National committees and regional promotion

National committees

37. By April 1994, 135 countries had declared their formal participation in IDNDR, 83 of which established national committees, and 48 appointed focal points. Four new countries are currently in the process of establishing national committees.

38. In July 1993, the IDNDR secretariat requested the national committees and focal points to evaluate their progress in meeting the Decade's targets, and to indicate their plans in this respect for the second half of the Decade.

39. In particular they were requested to report on:

(a) The composition of national committees, and focal points;

(b) The prevailing hazards, recent natural disasters, and the human and economic losses caused thereby;

(c) Assistance required and available for natural disaster reduction;

(d) Disaster mitigation activities, recently completed or under way;

(e) Steps taken towards achievement of the three main targets of the Decade;

(f) Their national plans and legislation for natural disaster reduction.

40. By April 1994, 92 countries had provided national reports to the IDNDR secretariat. A summary of these reports is available as an addendum to the present report (A/CONF.172/4/Add.1).

41. Although the national reports indicate that progress has been made in the implementation of the International Framework of Action for the IDNDR, it is obvious that the developing, and especially the least developed countries need support to reach the Decade's targets. This is particularly true for training, risk assessment, hazard mapping and warning.

42. As has been emphasized in the national reports, such assistance should be drawn increasingly from bilateral sources, through regional cooperation, and through the exchange of information and know-how among countries prone to the same hazards. Furthermore, the developing countries request international organizations and donor governments to ensure that disaster reduction measures are included in disaster relief and development assistance.

43. The Decade is perceived to be a most valuable instrument to increase political and public awareness of the benefit of natural disaster reduction, and yet it has been remarked that the Decade concentrates perhaps too much on its international and scientific aspects. Thus, many reports emphasize the need for support nationally, and that such support should be increased and focused above all on the general aspects of disaster management and reduction.

Regional promotion

44. A high priority has recently been given to the support of regional IDNDR initiatives. Indeed, a significant increase of political awareness for natural disaster reduction has emerged during regional preparations for the World Conference on Natural Disaster Reduction.

(a) Africa

45. After the disastrous droughts and famines of the 1980s in which hundreds of thousands perished, another drought occurred in southern Africa in 1992/93, but disaster was averted through timely international action. Following a subregional meeting in September 1993, a series of country programmes was installed. The IDNDR secretariat has actively supported the programme through its good offices and promotional work in the African region.

46. Africa has taken note of the General Assembly's recommendations on IDNDR. In February 1994, the Council of Ministers of the Organization of African Unity (OAU) endorsed a proposal for an African Common Position for the World Conference. The Council of Ministers emphasized that disasters have seriously compromised the economic performance of the region, and that they have compounded the cycle of environmental degradation and poverty. It also recognized that existing strategies for disaster relief assistance do not take into account the longer-term issues of disaster reduction, which are tied to development. Therefore, an effective strategy for disaster reduction should be included in medium to long-term development strategies. As a result, a background paper presented to the Economic Commission for Africa's meeting of Ministers of Planning and Economy in April 1994, provided the framework of an African action programme for disaster reduction. A major theme of the African regional programme is that natural disaster reduction forms an integral part of sustainable development.

(b) Asia

47. Disaster preparedness and prevention have a long tradition in many parts of Asia. Programmes in Japan demonstrate that even in the most disaster-prone countries, disaster reduction can achieve positive results. Japan has from the very beginning of the Decade, taken a leading role in promoting and supporting IDNDR's programme. International conferences in Chiba City (1992) and Aichi/Nagoya (1993) further confirmed Japan's role that has led to the World Conference.

48. Many countries in Asia have well-developed national disaster mitigation programmes, and are showing rising interest in international cooperation and in strengthening their institutions for that purpose. The Chinese National IDNDR Committee has developed, among others, an extensive national disaster reduction programme within the framework of the Decade. An international conference on disaster reduction in Beijing on 25 and 26 June 1993, resulted in an important report and recommendations that deserve close international attention.

49. At the request of the IDNDR secretariat, the Asian Disaster Preparedness Centre (ADPC) in Bangkok prepared a background paper reflecting the current

status and future requirements for the implementation of the IDNDR Framework in South and South-East Asia, in cooperation with the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Asian Development Bank (ADB). A working group composed of senior Asian professionals as well as representatives from regional and international organizations, met in February 1994, to review the question.

50. A regional meeting of the SAARC countries was held in March 1994, in New Delhi in order to consider a common SAARC position at the World Conference, as well as a regional programme for disaster reduction.

(c) Caribbean

51. The approach adopted by the Caribbean States has been dictated by the special needs of small island States, where much emphasis is placed on hurricane warning and preparedness. A regional meeting was organized in Port of Spain, Trinidad, by the Seismological Research Unit (SRU) of the University of the West Indies, with the support of the Caribbean Disaster Emergency Response Agency (CDERA), the Caribbean Community (CARICOM), the Pan-American Health Organization (PAHO), and the Organization of American States (OAS). The objectives of this meeting, held on the International Day for Natural Disaster Reduction (October 1993), were to encourage the scientific community of the region to participate in preparations for the World Conference, and to emphasize the need to include earthquake risk reduction more prominently in the agendas of national IDNDR committees. Among the recommendations of the meeting, particularly worth mentioning is the priority given to the vulnerability analysis of critical facilities, such as hospitals and schools. PAHO and OAS undertook to increase their cooperation in their respective areas of competence.

(d) Commonwealth of Independent States

52. Regional interest in the IDNDR has surged in the CIS. A meeting of the CIS countries in Bishkek, Kyrghyzstan, in December 1993, encouraged all the participating countries to join IDNDR and report on their national activities in disaster reduction.

53. National reports reveal that a considerable amount of knowledge and experience on the wide range of natural hazards exists in the CIS, including technological and environmental hazards. The need to include the latter in IDNDR activities in the region has been emphasized. The high frequency and magnitude of natural hazards facing the CIS, as well as its increased vulnerability caused by economic, social and political changes have also been recognized, and underscore the need for effective regional cooperation in training, institution building and in building international links.

54. The meeting in Kyrghyzstan resulted in the establishment of an Interstate Council of the CIS countries hosted by EMERCOM of Russia. An agreement on the establishment of regional cooperation was signed by all the CIS countries. A follow-up meeting held in Almaty, Kazakhstan, in March 1994, finalized the report of the CIS countries to be presented at the World Conference.

(e) Europe

55. Practically all European countries have well-established civil protection organizations and many scientific research institutes specialized in the scientific and technical aspects of disaster reduction, particularly in the earth sciences and engineering. The Council of Europe has established its "Open Partial Agreement" on earthquake risk reduction in Europe and the Mediterranean region. The Nordic countries have traditionally worked closely together in disaster preparedness and management. Many European experts and institutions are active in IDNDR, as are a number of National Committees. Professor M. Lechat of Belgium, one of the Decade's founding fathers, has been the Chairman of the STC Technical Preparatory Group for the World Conference. Germany and Italy have contributed significantly to the Decade by seconding professional staff to the secretariat.

56. A meeting of national IDNDR committees and focal points of the European Union (EU) was held in Brussels in September 1993, with the support of the European Community Humanitarian Office (ECHO), in order to discuss individual and coordinated contributions of the EU countries to the objective and goals of the Decade, and to the World Conference. The meeting noted the very disparate levels of activity among countries of the EU. The meeting also noted that IDNDR's scope was perceived differently from country to country, ranging from concern for natural disaster reduction solely in national terms to exclusive concern for the developing countries.

57. International meetings within the Decade's Framework include two workshops organized by the Royal Society of the United Kingdom in April and October 1993, and meetings in Italy, notably at Perugia. The German Development Foundation, at the request of the IDNDR secretariat, held an international meeting on disasters and development in Berlin in January 1994. The report of the meeting and its recommendations are available at the World Conference.

(f) Latin America

58. In Latin America, strong national and regional disaster reduction programmes have been developed over the years. International organizations, including DHA, support a wide range of disaster mitigation projects. Regional organizations, such as the Pan-American Health Organization (PAHO) and the Organization of American States (OAS) have promoted the organization of national, multidisciplinary workshops to promote the participation of all sectors and institutions in disaster reduction. The IDNDR has a regional activity for Latin America and the Caribbean. In this connection, workshops have taken place in 11 countries. The main output of this activity is an intersectoral statement of priorities.

59. A subregional meeting was organized for the Andean region in Colombia, in August 1993. A Central American workshop was held in El Salvador, in February 1994. Regional preparations in Latin America for the World Conference culminated at an inter-American conference held in Cartagena, Colombia, in March 1994. This event was co-sponsored by IDNDR, PAHO, OAS, the Red Cross, and many scientific and non-governmental organizations.

60. Among the conclusions most frequently reached in these meetings are the need to strengthen the role and leadership of development agencies, rather than continue to rely on specialized mechanisms for disaster relief and response; and the need to obtain the participation of legislatures in this process.

(g) North America

61. The United States of America, together with Japan, has been among the most important initiators and sponsors of the Decade, and its founding General Assembly resolution. The National Academy of Sciences, the National Science Foundation and many Agencies and Departments of the United States Government took part in all the conceptual thinking that went into shaping the Decade. Dr. Frank Press, former President of the United States Academy of Sciences, is one of the founding fathers of the Decade. The United States Geological Survey (USGS) and the Federal Emergency Management Agency (FEMA) have seconded senior staff to the Decade since the establishment of its secretariat. Representatives of the United States Government, of the scientific community, and of the private sector have actively participated in all the principal activities of the Decade. An annual international meeting in Boulder, Colorado, in 1993, devoted a number of sessions to IDNDR and the World Conference. Canada and Mexico have initiated many national IDNDR activities. Canada made an important contribution to the Decade in the person of Mr. J. Bruce, Chairman of STC.

(h) Pacific

62. A regional meeting of national IDNDR committees was held in Vanuatu in August 1993. This meeting was held thanks to the generous support of Australia. It was recognized that some countries of the region lack the infrastructure and disaster management arrangements to be able to sustain active involvement in IDNDR activities. Countries active in implementing the IDNDR Framework should be ready to assist those still not involved. In this regard, the meeting noted the role of the UNDP/DHA South Pacific Disaster Reduction Programme, and observed that it provides a sound vehicle to enhance disaster management capability in the South Pacific.

63. All the participating countries stated their need for focal points for education and awareness-raising. A start could be made through the services of the DHA Pacific Programme Office (SPPO) and of the Australian IDNDR secretariat. The meeting agreed on the establishment of a working group to be coordinated and supported by both these entities. The SPPO has provided assistance in the preparation of national reports and the regional report for the South Pacific region to the World Conference. The regional report is endorsed by the South Pacific Regional Environment Programme (SPREP).

D. Public information; information dissemination, technology and systems

Public information

64. The basis for public information activities of the Decade was laid out in a strategy for public information formulated by the STC in 1991. Public

information activities have concentrated on two major areas: the publication and distribution of the IDNDR newsletter Stop Disasters, and the observance of the International Day for Natural Disaster Reduction.

(a) Stop Disasters

65. The newsletter, Stop Disasters, published at the Osservatorio Vesuviano in Naples, with support from the Italian Government, has become the Decade's main promotional platform. Eighteen issues of Stop Disasters have been issued to date. The press run has gradually increased from 8,000 to 15,600. The newsletter is currently distributed in 192 countries and territories to national IDNDR committees, agencies involved in disaster management, intergovernmental and non-governmental organizations, research and financial institutes. The newsletter, which is produced in four languages, currently serves as an important link between Decade partners. Recently, the United States Federal Emergency Management Agency (FEMA) announced annual support for Stop Disasters. Further contributions have been offered from various sources, including the private sector.

(b) International Day for Natural Disaster Reduction

66. The second Wednesday of October every year is the International Natural Disaster Reduction Day. The IDNDR Day was observed in 1992 and 1993 under the following themes, respectively: natural disaster reduction and sustainable development (1992); focusing on schools and hospitals (1993). On both occasions, observance guidelines and information packages containing publications and other audiovisual materials were compiled and sent to national IDNDR committees, and to regional and international organizations. The varied and innovative observance programmes organized by national IDNDR committees and regional and international organizations indicate a growing interest and involvement in Decade activities.

(c) Public information for the World Conference

67. A World Conference public information programme has been prepared, drawing upon the participation of Decade partners, as follows:

(a) Press kits for the media and other partners in public information;

(b) A general exhibition at Yokohama in which scientific institutes, national IDNDR committees, United Nations agencies and other organizations will take part;

(c) A children's drawing exhibition which has been preceded by national competitions;

(d) A round-table meeting in Yokohama, organized in cooperation with the Annenberg Foundation, to examine the roles of the media, managers and scientists in the dissemination of information on natural disaster reduction.

68. The information campaign beginning in 1994, as recommended by STC, focuses on Decade targets, one by one, worldwide. This enables the identification of priority areas of action, the formulation of common

strategies, and the mobilization of efforts and international participation along a clearly defined path, linking promotion with corresponding actions in the IDNDR programme.

69. In each campaign phase, the scientific community, governments, disaster-prone communities, the media and all other actors in the Decade are asked to contribute their share to the achievement of each target. This can facilitate the mobilization and channelling of support to disaster-prone developing countries, regions or communities seeking assistance.

(d) Decade partners

70. The United Nations Department of Public Information (DPI), which has been assigned a major role in the promotion of the Decade, has produced a video film entitled "Up Against Nature", a brochure on the Decade, and a student leaflet on disasters which has been widely distributed to national IDNDR committees and regional and international organizations. DPI has also cooperated with the secretariat in the organization of press conferences and press releases on a number of Decade-related events.

71. Organizations of the United Nations system, notably WMO, WHO and UNICEF, and other regional and international organizations have produced promotional material on their respective activities related to the Decade. They have also cooperated closely in the compilation of information material for the World Conference media kit.

72. A number of National IDNDR Committees have started their own regular newsletters on the Decade, and have produced special publications and other audiovisual materials on the occasion of the annual International Day for Natural Disaster Reduction. Also at country level, the offices of the Resident Coordinators have given their support to programmes launched as part of the promotion of the World Conference.

73. Although there are some signs of public interest and involvement in Decade activities, a significant amount of work still needs to be undertaken by all Decade partners to further highlight the potential which exists for disaster reduction.

(e) Information dissemination, technology and systems

74. Disaster-related information and communications systems were considered during several IDNDR-sponsored or related meetings. The needs identified and the recommendations made at these meetings were in turn considered by a consultative group of the IDNDR Scientific and Technical Committee in September 1993. This group recognized the importance of disseminating information about the technology of disaster management. It was noted that a number of independent or shared emergency management and response systems exist, based on real-time (or near real-time) communications and computer technologies. These take advantage of terrestrial or space links and are mainly used in disaster relief.

75. The Department of Humanitarian Affairs is planning a new International Emergency Readiness and Response Information System (IERRIS). Its purpose

is to ensure that information of the quality, quantity and timeliness needed is available in the event of international emergencies at multiple decision-making points worldwide. IERRIS is being developed with the support of the Government of the United States. The needs of IDNDR and its partners should be taken into account in the design and implementation of IERRIS. This will permit a maximum of access to the required information for all countries, particularly the developing countries.

76. Information technology is evolving very rapidly. There are many different systems and networks, as well as stand-alone databases which will have to be evaluated. One such system, INTERNET, may become the basis for future disaster information sharing and exchange. It already has in place networks specializing in disaster-related information. Connecting INTERNET to existing and planned (IERRIS) information and communication systems may help accelerate access by disaster managers to the information they need.

77. New forms of networking depart from the traditional centralization of information management functions, placing greater emphasis on information sharing and exchange. Thus, information is being stored in different locations to be assembled through network links. The two principal areas in which information systems development, within the Decade framework, intends to concentrate are:

(a) Defining the information needs of disaster managers at all levels;

(b) Developing communication requirements for the transmission of disaster mitigation data to networks which show promise in connecting all nations, including the developing countries, to the future "information superhighways".

By defining information requirements, a solid disaster prevention and mitigation database can be established. It would cover hazard, vulnerability and risk (expected loss) assessment of selected disaster types, the evaluation of the cost effectiveness of mitigation measures, and the analysis of disaster management systems, including communications capabilities. In order to provide easy access to this information, a standard data format must be established. While it is not suggested that the IDNDR secretariat should collect and centralize the data, it should inform potential users of its availability and means of access. In this way, potential users (national governments, local authorities, investment banks, insurance companies and international, intergovernmental and non-governmental organizations) will be helped in their decision making.

E. Economic aspects of disasters and the private sector

Economic considerations

78. The adverse economic impact of natural disasters has become a major cause of concern. In the developing countries, owing largely to the absence of building and land use controls, both capital losses and loss of life caused by disasters are crippling for the economy and social services. In the industrialized countries, capital losses by far outweigh loss of human lives. Owing to the growing complexity of modern society and its technological

infrastructure, the costs of replacement and repair are likely to become increasingly burdensome. The indirect losses, such as loss of production, are difficult to measure but can be estimated to have equally damaging effects on the economy. The Munich Reinsurance Company has reported that worldwide disaster-incurred losses varied between $41 billion to $60 billion over a three-year period (1991-1993). While such figures are merely estimates, the upward trend is clear.

79. There are growing difficulties in the world of reinsurance where the capability to insure against major natural hazards is shrinking proportionally with the rising financial costs of insured losses. Remedial action is, therefore, urgently required to reduce risk and keep insurance premiums under control through preventive measures. The IDNDR secretariat is stepping up its efforts to involve the business sector in disaster reduction, and to promote collaboration between business and public authorities in applying appropriate technologies to prevention. The programme of the World Conference on Natural Disaster Reduction reflects this will.

80. The importance of introducing mitigation policies and measures into development projects that are exposed to the risk of disaster can only be emphasized and underscored. The costs of mitigation can be measured against the probable loss of lives and property, jobs and services incurred by disaster. A corollary is that disaster prevention must become part of the concept of sustainable development. It is probably the logical route to a satisfactory achievement of IDNDR's objective. Many industrialized countries are now measuring the impact of natural and environmental disasters in GNP terms. This is an encouraging step, as it focuses on both causes and effects of disasters, and not merely on the symptoms, namely emergencies and relief.

Private sector

81. The reinsurance industry is presently seen as an important source of experience and guidance in addressing the issue of economic impact of natural disasters. Several industrial sectors are believed to be a valuable source of information and cooperation for IDNDR. Companies and professional associations operating in telecommunications, remote sensing, chemicals, civil engineering, electronics and satellite technology are well placed to dedicate some of their efforts to the study of disaster warning and reduction. However, more information on the subject is needed by the private sector. To overcome this lack of information, the secretariat is implementing an enlarged information strategy which envisages a more direct approach to private companies.

82. Several private sector workshops on disaster reduction were held in 1992 and 1993 under the auspices of the Office of United States Foreign Disaster Assistance (OFDA). These workshops proved to be an appropriate instrument for establishing useful interaction between the public and private sectors. Furthermore, they demonstrated that disasters are becoming a matter of concern for those who have to bear the costs of disasters out of their own pockets.

83. A tentative framework for cooperation with the private sector has been identified, and the collaboration of the United States Volunteers In Technical Assistance (VITA) has been particularly useful in this regard. VITA has mush

experience with the public-private sector interface on disaster mitigation issues. A meeting organized by the IDNDR secretariat in 1993 noted that disaster information of interest to private companies should be systematically provided. It seems that the private sector is not always aware of the potential of disaster reduction or of the Decade's initiatives in this domain. It was pointed out that the attention of national IDNDR committees should be drawn to this point. The IDNDR newsletter, Stop Disasters, should open up to private contributions. The meeting discussed the possible setting up of a private sector advisory body, which would constitute a new substantive step towards a more effective collaboration between IDNDR and the private sector.

F. International demonstration projects and international and regional projects

84. The Scientific and Technical Committee recommended the establishment and promotion of illustrative projects, known as International demonstration projects. These projects have been selected and are actively monitored by the Decade secretariat. The objective of these illustrative projects is to provide practical examples for disaster reduction managers. A list of demonstration projects is annexed to this report (A/CONF.172/4/Add.3).

85. Because of the increasing number of projects presented for endorsement as demonstration projects, and recognizing the importance of the participation of as many agencies and organizations as possible, STC at its fourth session in 1993 devised three new categories, in addition to the existing demonstration projects:

(a) International and regional IDNDR projects which fall within the framework of the Decade and contribute towards achieving one or more of its targets;

(b) National IDNDR projects which fall within the framework programme of the Decade and contribute towards achieving one or more of the targets, and which have a special value;

(c) National IDNDR demonstration projects which national committees and focal points may wish to designate, and notify the secretariat of.

For ease of reference, these projects are referred to in this report as IDNDR projects.

86. In order to intensify project activities throughout the world and provide guidance to the secretariat and STC on project promotion, STC established a sub-committee comprised of seven members. In July 1993, the STC Sub-Committee initiated a quarterly review of project activities. Four such reviews by the STC Sub-Committee have provided lessons to be learned from the IDNDR projects.

87. Currently, 33 projects (23 demonstration projects and 10 IDNDR projects) are being carried out by seven international scientific and technical organizations, two regional research centres, seven United Nations agencies, three national institutes/universities, and two others. Two demonstration projects by United Nations agencies have been successfully completed.

88. For the period 1990-1994, 25 projects held 71 meetings or workshops which were attended by about 1,000 persons from 154 nations, United Nations agencies and international scientific and technical organizations. Forty-four training courses were attended by more than 1,000 trainees from 100 countries. These meetings and training courses have served not only to disseminate and exchange natural disaster-related knowledge/technology, but also to provide principles and models for natural disaster reduction.

89. Thirty-eight publications, books, proceedings or brochures, and a glossary on natural disasters have resulted from 16 projects. The content of these documents exceeds 4,000 pages. Some of them have been provided free of charge to needy libraries in developing countries. Furthermore, 12 computer software/database systems on natural hazards and engineering have been developed through IDNDR projects.

90. The World Seismic Safety Initiatives project (WSSI), has been devised to increase disaster awareness among policy makers. The Global Seismic Hazard Assessment Programme (GSHAP) is the nucleus of a collaborative effort in the field of earthquake hazard assessment in six regions of the world. The Cyclone Disaster project has developed the use of an unmanned aircraft, the aerosonde, which is used to monitor the atmosphere for cyclone warnings in a safe and cost-effective manner. Three databases on natural disasters have become available to be accessed by people engaged in disaster management. In addition, the UNDP Disaster Management Training Programme (DMTP) has developed a diversity of training materials, mostly in the emergency management field, for UNDP field staff.

III. MID-TERM REVIEW OF THE INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION

91. A mid-term review of the Decade was foreseen when the General Assembly proclaimed the Decade in 1989 (resolution 44/236 of 22 December 1989). A world conference of national IDNDR committees, contributing to the mid-term review, was endorsed by the General Assembly in 1991 (resolution 46/149). In 1992 the STC established the Technical Preparatory Group and began to work on preparations for the World Conference by drafting and adopting the conference's outline programme. During 1993, the Group, in coordination with the IDNDR secretariat and the IAWG, assisted in finalizing the conference programme.

92. In January 1993, the Government of Japan issued an invitation to the Secretary-General to convene the World Conference in May 1994 in Yokohama, Japan. The invitation was accepted, and the preparatory work continued, leading to the adoption by the General Assembly, in December 1993, of resolution 48/188, endorsing the Conference as a United Nations conference, and designated the IDNDR secretariat as the secretariat for the Conference. The Secretary-General has issued invitations to all governments, United Nations and other agencies, and to the private sector, as specified in the resolution.

93. As a consequence of the adoption of resolution 48/188, the preparatory work for the World Conference was re-oriented to ensure the involvement of governments. A series of briefings for the Permanent Missions to the

United Nations Office at Geneva was followed by the meeting of the Preparatory Committee in Geneva in March 1994. The Committee approved the establishment of the Bureau of the Preparatory Committee, composed of six regional representatives, as well as the Conference Programme and Rules and Procedures.

94. In spite of the very short time available to prepare and organize the World Conference following resolution 48/188, the Member States have agreed with the preparatory work so far accomplished, and thus have established a solid basis for the Conference. The preparations for the Conference Programme have been completed in close coordination between the Preparatory Committee, its Bureau, the Agencies and the STC Technical Preparatory Group. The World Conference on Natural Disaster Reduction is expected to be a milestone in policy development and implementation for natural disaster reduction, not only for the second half of the Decade but beyond, into the twenty-first century.

IV. CONCLUSIONS

95. The International Framework of Action for the International Decade for Natural Disaster Reduction which was established by the General Assembly in resolution 44/236, will be reviewed in 1994 by the Economic and Social Council. Set out below are some of the conclusions which have emerged from consultations with a wide range of Decade partners.

A. Objective and goals

96. Thousands continue to die every year, with every event. The developing countries continue to suffer most from natural and other disasters. The cost of relief and reconstruction is a burden to their economies, threatening their sustainable development and is ultimately far greater than the cost of prevention. The first and foremost challenge in the years to come is to bring the developing countries on a par with the others in terms of mitigation and prevention.

97. Progress has been made in reaching the goals of the Decade. Awareness of the benefits of disaster reduction has increased. Exchange of information has improved, particularly in the scientific community, but technology transfer and the practical application of scientific and technical knowledge still needs considerable strengthening. As the goals set in the International Framework of Action for IDNDR are rather broad, the targets set in resolution 46/149 of the General Assembly have helped considerably in focusing attention and effort.

98. A number of projects have been established under the Decade umbrella: a much larger number of disaster reduction projects are being implemented without reference to the Decade. Wider dissemination of information on these projects and their results through the Decade framework would add value to the programme. An international network of institutions could considerably strengthen the exchange of information and knowledge, through research, training and technology transfer. The IDNDR newsletter Stop Disasters could constitute a useful channel in this regard.

99. The Decade's objectives and goals, therefore, have been and remain valid in spite of the many changes that have occurred in the world since the Decade

was created in 1989. It is trusted that the international community shall reaffirm the Decade's action in this respect.

B. Policy measures to be taken at the national level

100. The extent to which disaster reduction has consistently been taken into account in national development programmes is unclear, but recent information indicates a growing tendency to address disaster issues as part of development. Disaster reduction, or prevention, is part of planning rather than emergency management. Nevertheless, the initiative for prevention arises often in the wake of a disaster and therefore, sadly, the emergency phase of a disaster is the most opportune moment to galvanize a country's or community's political will to prevent future destruction and loss of life. To motivate society ahead of disasters is still an uphill struggle. Perhaps the answer to this problem lies in reinforcing the link of disaster reduction with sustainable development, of which it is clearly a part.

101. Of the 135 national IDNDR committees or focal points established so far, some are active, and others have never been heard of since. To be useful and add value to national disaster reduction programmes, national committees should bring together the various sectors in the government, science, media, private sector etc., and play a catalytic role in national programme promotion, formulation and implementation. However, the funding of national committees has been a problem, but is one of the prerequisites for effectiveness.

102. Local level action is the key to success in disaster reduction. Unless individuals, families and communities are motivated and empowered to act, there shall be no success. The role of local non-governmental, "grass-roots" organizations is crucial in supporting such action. The tendency of non-governmental organizations has been to concentrate on relief, but support from national and local authorities could encourage their role in prevention and mitigation.

C. Action taken by the United Nations system

103. The commitment of the United Nations system to implementing the IDNDR's International Framework of Action has varied widely. Some organizations, notably WMO, have adopted the Framework and worked vigorously towards its goals. Many others have not participated actively enough. No additional resources have been made available for the mitigation activities of DHA. The information strategy established and approved for the Decade has not been carried out due to lack of resources. In the field, a limited number of resident coordinators have shown interest and promoted the Decade. As we approach the mid-term review and the World Conference, United Nations system interest is still uneven.

D. Organization of the Decade

104. The organizational arrangements, namely the establishment of SHLC, STC and the secretariat, have been completed. The Council has met twice, adopting two resolutions as general guidance for the Secretary-General. The STC has assumed an important role and been instrumental in shaping the Decade's

programme and technical content. The STC has played a major role in promoting and shaping the World Conference. The secretariat has suffered from frequently changing leadership and from the temporary nature of practically all staff assignments and secondments. Only recently have the integration of the secretariat in DHA and the merger with the Disaster Mitigation Branch started to pull the various strands of disaster reduction together, thus providing support to the Decade's most important goal - supporting programme development for disaster reduction in developing countries.

E. Financial aspects

105. The International Decade for Natural Disaster Reduction has been operated entirely on extra-budgetary support. Financing from a variety of sources during the first half of the Decade kept it afloat, but only just. Contrary to expectations at the beginning, direct financial support for the Decade's programme and projects through the IDNDR Trust Fund has remained scant. Results have come mainly from activities reported by governments, the scientific community, organizations of the United Nations system and others. Yet, the IDNDR Trust Fund is a potentially effective mechanism to assist disaster-prone developing countries in starting up basic disaster reduction programmes. Regular contributions to the fund are needed.

106. The crucial support structure of the Decade, the IDNDR secretariat, has lived on the short-term loan of seconded staff. This has hampered longer-term programme development for the duration of the Decade, let alone beyond. Unless core funding for the Decade can be secured, there is little hope for significant improvement.

107. The difficulty of funding programmes for disaster reduction is a sober reminder of the political priorities: a visible disaster relief action is much more attractive, even if in the long term it achieves very little, compared to a programme or project aiming at strengthening the national capacities to free society from the very need for disaster relief. A fundamental change from relief aid towards the strengthening of national capacities for disaster reduction through sustainable development programmes is required. It appears that until disaster reduction is perceived to be integral to the very notion of sustainable development, the goals and targets of IDNDR, and indeed all disaster mitigation is doomed to chronic shortages of interest, political commitment, and therefore resources.

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ACTIVITIES FOR NATURAL DISASTER REDUCTION

International Decade for Natural Disaster Reduction

Report of the Secretary-General of the Conference

Addendum

Summary of national activities for natural disaster reduction

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* A/CONF.172/1

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1. For the purpose of the discussions to be held by the World Conference on Natural Disaster Reduction and for the mid-term review of the implementation of the International Framework of Action of the International Decade for Natural Disaster Reduction to be carried out by the Economic and Social Council, the Secretariat for the International Decade for Natural Disaster Reduction (IDNDR) requested the national committees and/or focal points for the Decade to report on and evaluate activities ongoing or already completed in the field of natural disaster reduction. In particular, countries were requested to indicate the progress made towards meeting the three Decade targets and their plans towards fully achieving those in the second half of the 1990s. These targets are:

(a) Comprehensive national assessment of risks from natural hazards, with these assessments taken into account in development plans;

(b) Mitigation plans at national and/or local levels, involving long-term prevention and preparedness and community awareness;

(c) Ready access to global, regional, national and local warning systems and broad dissemination of warnings.

2. The reports were requested in the form of two separate documents: a detailed national report and a summary report. Guidelines were provided for the detailed national reports, and it was requested that the summary report be submitted in the form of a completed questionnaire.

3. The World Conference provided a considerable incentive to national committees and/or focal points. By the beginning of April this year, 92 national reports had been received by the IDNDR Secretariat, and varied in length from one to 300 pages.

4. Altogether, 135 countries are formally participating in the Decade, and while not all have reported on their national activities for natural disaster reduction, the World Conference provides the first opportunity for a global account of disaster mitigation activities, both implemented and planned.

5. The purpose of the present report is not to evaluate specific national achievements and programmes, since the information provided was not sufficient. For that purpose, individual national reports should be consulted. The aim of the present report is to provide an overall picture of the natural disaster reduction activities undertaken by countries in all parts of the world.

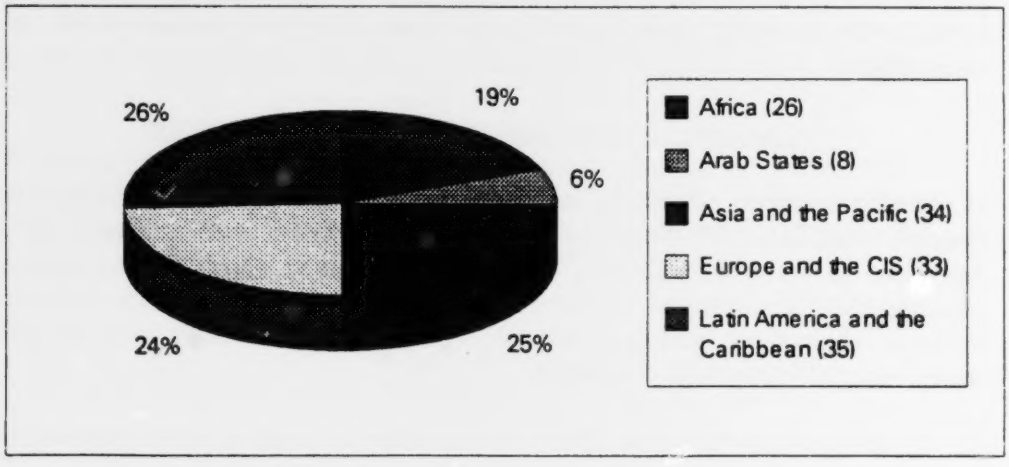
6. The present report and the full texts of the national reports which may be consulted during the World Conference provide a unique source of information to all national committees, whether active or inactive and in industrialized, developing or least-developed countries, to donor governments, and to international, regional or other organizations.

Number and regional distribution of national committees and/or focal points

7. The number of countries participating in IDNDR is 135, of which 83 have established national committees and 48 have appointed focal points. Four countries (Albania, Angola, Slovak Republic, Niger) are currently in the process of establishing a national committee. Since the beginning of 1992, 39 new national committees and/or focal points have been established. The distribution of countries participating in the Decade is indicated in figure 1 below.

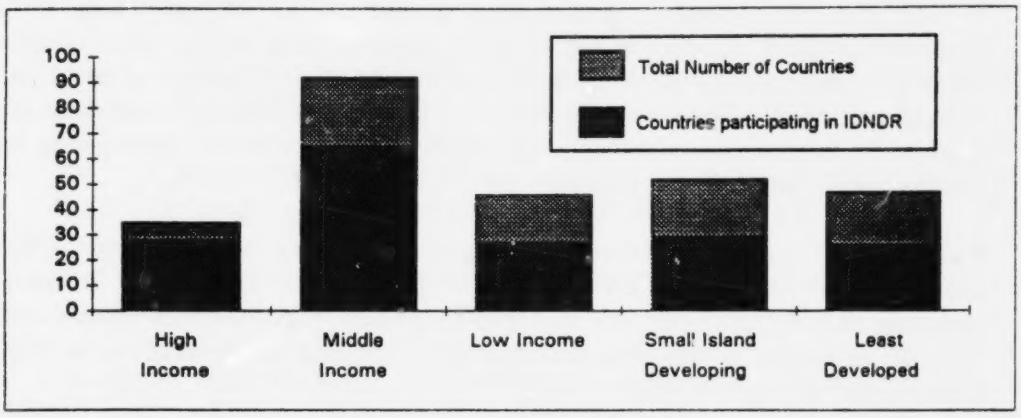
8. The largest increase in national committees and/or focal points was in the Pacific and among members of the Commonwealth of Independent States (CIS). In both, one particular country has taken the lead and established a coordination mechanism for IDNDR, in respect of the other countries (i.e., the Russian Federation for CIS and Australia for the South Pacific).

Figure 1: Distribution of countries participating in the International Decade for Natural Disaster Reduction



9. Of the 52 small island developing countries identified throughout the world, 29 are participating in IDNDR, and 26 of the 47 countries identified as least developed are represented. Furthermore, of the 135 countries participating in IDNDR, 28 can be considered high income countries, 65 considered middle income, and 27 considered as low income countries. For a breakdown of countries according to economic aggregates, see figure 2.

Figure 2: Countries participating in IDNDR according to economic aggregates



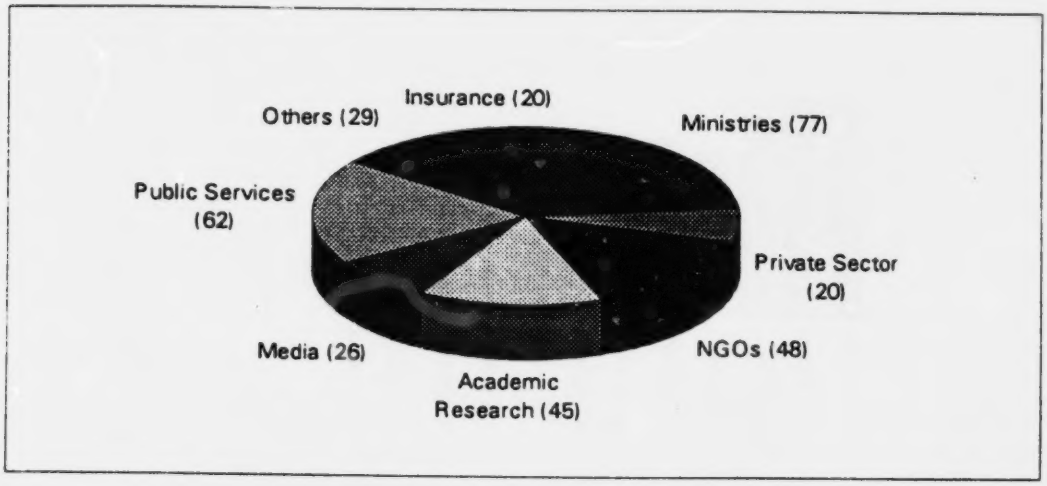
10. An 1992 assessment of activities of national committees and/or focal points showed that 32 countries had not gone beyond an initial endorsement of the aims of the IDNDR. Of those 32 countries, 12 have since submitted national reports to the Secretariat.

Composition of national committees and focal points

11. Ideally, as recommended in the report of the Secretary-General submitted to the General Assembly (E/1989/114/Add.1-A/44/322/Add.1) and endorsed by the Assembly in resolution 42/169, a national committee should be composed of representatives of responsible ministries, government bodies and services, research and scientific institutions, non-governmental organizations, the media and the private sector, especially insurance companies.

12. Of the reporting countries, 78 reports providing information on the composition of their IDNDR mechanism (see fig. 3).

Figure 3: Composition of IDNDR national committees and focal points



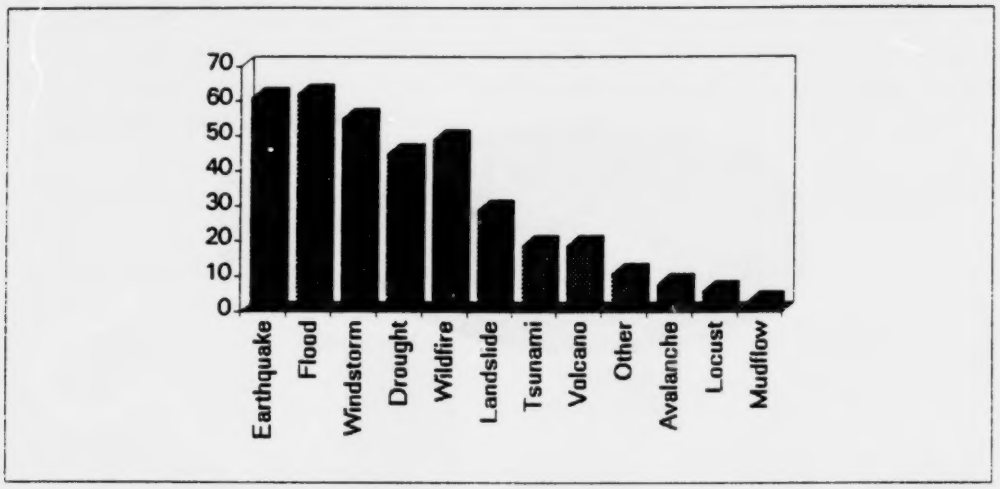
13. While two years ago non-governmental organizations, the media, insurance companies and the private sector were unrepresented in national committees, these sectors are now far better integrated.

Prevailing hazards

14. In 88 reports, information was provided on prevailing natural disasters: floods (62), earthquakes (61) and windstorms (55). Many countries included a number of technical, environmental and other man-made disasters which were not taken into consideration in the evaluation conducted because they were not within the IDNDR scope.

15. The reports show that prevailing hazards in recent years caused more than 750 individual natural disasters, affecting more than 300 million people, claiming more than 160,000 human casualties and resulted in economic losses of over $US 177 billion (see fig.4).

Figure 4: Prevailing hazards



Availability of assistance and assistance required for natural disaster activities

16. Fifty-seven countries indicated that they could make assistance available to other countries. The type of assistance available includes technical equipment (offered by 47 countries), know-how (offered by 43) and financial assistance (offered by 17 countries). According to the reports under review, assistance was requested by 58 countries, 46 of which required know-how, 49 technical equipment, and 43 required financial assistance. Table 1 below provides a quick reference to areas of assistance.

Table 1: Main areas of assistance available or required for disaster reduction

Assistance available			Assistance required		
Know how	Technical equipment	Financial	Know how	Technical equipment	Financial
training	rescue teams	general	training	fire fighting	general projects
risk assessment	medical relief		risk assessment	medical relief	relief goods
hazard mapping	information systems		hazard mapping	information systems	building of warehouses
monitoring	communication systems		public awareness	emergency communication	logistics/ transport
vulnerability assessment	relief aid (general)		disaster legislation	relief aid	shelter/ evacuation centers
early warning	logistics/ transport		hazard monitoring	logistics/ transport	shore protection
disaster management	scientifical data		disaster management	disaster warehouses	information systems
building standards	meteorological services		agricultural measures	information material	awareness programmes
community preparedness	flood warning systems		flood control	satellite tracking	building of headquarters
research assistance	structural risk reduction measures		public information policies	early warning systems	low-cost housing

17. Training was requested or offered by most countries. Assistance in risk assessment, hazard mapping and monitoring was offered by a number of countries almost equal to the number requesting it.

18. While the purpose of transferring and requesting know-how was primarily to improve disaster prevention strategies, the purpose of providing and requesting technical equipment was directed at preparedness and relief operations. Of particular importance in the latter case were rescue teams and equipment, communication systems and logistics and transport.

19. It is interesting to note that there is almost a perfect match between the assistance offered and the assistance required. Countries which have offered or requested assistance could consult individual national reports or the lists available with the Secretariat so that potential donors can be matched with recipients.

Disaster mitigation activities completed or under way

20. The costs of more than 1,300 individual projects listed in the reports review amounted to more than $US 8 billion (see table 2).

Table 2: Disaster mitigation activities

	Identification of hazard zones	Monitoring, Prediction and Warning	Short-term protection measures	Long-term preventive measures	Land-use and risk management	Public information and education
Number of countries reported	68	71	64	56	50	57
Number of projects	231	175	192	301	80	402
Estimated costs of projects	1,6 billion US$	242 million US$	2,7 billion US$	3,3 billion US$	142 million US$	42 million US$

Steps taken towards achievement of the three main targets of the International Decade for Natural Disaster Reduction

(a) Comprehensive national assessments of risks from natural hazards

21. Risk assessment is one of the first steps that should be taken towards effective disaster reduction, and 60 countries listed their achievements and future plans in this area. A number of industrialized countries in Europe considered themselves low-risk areas with no specific need for risk assessment and hazard mapping. Nevertheless, most countries not prone to natural disasters indicated that risk assessment was both necessary and supported within assistance provided to developing countries threatened by disasters.

22. Most countries reported that their efforts at risk assessment were concentrated on the principal prevailing hazard. Only in a few countries were comprehensive risk assessments being carried out or previous assessments updated.

23. Hazard maps had been developed in most of the countries that reported on risk assessment. Gaps, however, existed in the provision of observation and statistical information. Furthermore, it was considered that micro zonation should be increased in particularly vulnerable areas that would otherwise be neglected in large-scale maps.

24. Although hazard maps are available, they rarely take into account loss assessment in the case of a disaster or evaluate the probability of the disaster re-occurring. Further, few countries have combined hazard maps with an assessment of vulnerability of the population, sectors of society and life-lines at risk, or the special conditions prevailing in megacities.

25. Some countries indicated that data provided by insurance companies, agricultural departments and civil defence offices, as well as information on emergency preparedness and the possible influences of climate change, have been integrated into hazard mapping and risk assessment. Nevertheless, in general, the users have not been closely involved in risk assessment although it is obvious that their inclusion in that process would have provided improvements not only in the methods applied but also in the collection and quality of data, the density of networks and the upgrading of instrumentation.

26. In their reports, 27 countries stated that risk assessment had been integrated into development planning. One industrialized country noted that the concept of risk assessment would best be integrated into the development plans of, and support provided to, developing countries. Other countries reported that financial input into disaster reduction was increasing progressively, along with national economic development.

(b) Mitigation plans at the national and local levels

27. Altogether, 46 countries reported that disaster mitigation plans were in place. Apart from addressing natural as well as technological, environmental and other disasters, most of those plans were focused on disaster relief and preparedness activities and included only marginally disaster prevention measures.

28. Legislation, building codes, land-use and other regulations lacked a mechanism for enforcement and control, and incentives for implementation. Some countries reported on the financial implications of their national disaster mitigation planning but since they covered for the most part reduction as well as relief efforts, with only a small percentage allocated to natural disaster reduction activities.

29. Long-term disaster prevention activities were reported as being implemented or planned by 36 countries. These activities were concerned mainly with structural or re-enforcement measures.

30. The disaster preparedness activities reported on by 39 countries were concentrated on building institutional and infrastructural capacities for relief activities mainly at the national rather than at the local or community level. In this respect, it should be noted that some countries had cooperated in the establishment of regional inter-governmental organizations to promote disaster preparedness.

31. Community awareness activities were ongoing or planned in 34 countries and included training and sensitization; establishment of regional, local or community-based centres; simulation, evacuation and drill exercises; psychological and behavioural studies; and special media programmes. Some countries specified the sectors of society that were involved, for instance, schools, universities, non-governmental organizations, insurance companies, trade unions and political parties.

(c) Ready access to global, regional, national and local warning systems and broad dissemination of warnings

32. Access to global warning systems was reported by 29 countries. Specifically mentioned were services provided by World Weather Watch, meteorological satellites, the World Center on Tropical Cyclones, the Global Seismic Network and the databases maintained by Red Cross and Red Crescent Societies. Many countries stated that access to such a technology was not possible because of a lack of financial resources and insufficient technical infrastructure.

33. Access to regional services were reported by 41 countries which named specifically regional warning centres such as the Pacific Tsunami Warning Center (operated from the United States of America), information provided by the Southern African Development Community (SADC), the Nordic Warning System (Sweden, Denmark, Finland and Norway), the African Regional Centre for Remote Sensing, for Drought Monitoring and the Inter-governmental Authority on Drought and Development (IGADD) in Djibouti, the Asian Typhoon Committee and the Joint Pacific Typhoon Warning Centre in Guam, United States Navy cyclone warning and advisories, the Cyclone Forecast Reunion, the National Emergency Management Agency (NEMA) in Trinidad and Tobago and the Economic and Social Commission for Asia and the Pacific (ESCAP). Many countries also indicated co-operation with neighbouring countries, as in the case of the Central American Center for Prevention of Natural Disasters.

34. National warning systems, mainly meteorological, hydrological and seismological monitoring services, were listed by 55 countries. Among these, 23 have wide-spread local monitoring and information networks and warning stations with adequate connection to national co-operation agencies. Many countries also reported the use of amateur radio networks.

35. Forty countries reported on arrangements made to disseminate warnings to the population at risk, some reaching as much as 70 to 100 per cent of the national population. The effectiveness of the dissemination of warnings depends mainly on national media, such as newspapers, radio and television, telecommunications, and siren warnings usually used for civil defence purposes. Problems do arise in mountainous areas or small islands States, or in rural areas where adequate telecommunications are often lacking. In these cases, special contact points were assigned the responsibility of spreading the information to the population within their area. The problem of delays the transmission of information was mentioned in several reports and the need for adequate emergency communication systems was emphasized by many countries.

National plans and legislation for natural disaster reduction

36. On the basis of information provided in the reports, it would appear that 76 countries have specific plans and legislation for natural disaster reduction. Most of the plans and legislation, however, concern preparedness and relief: only 25 countries have legislation dealing exclusively with natural disaster reduction. Fifty countries reported legislation for natural disaster reduction as being integrated into existing legislation for relief activities and disaster situations.

Overall evaluation of national disaster mitigation strategies

37. National committees and focal points were requested to assess whether the targets set by the national committee had been met and whether national disaster mitigation plans had been implemented, and to report on other IDNDR activities undertaken.

38. According to the reports received, most national committees and focal points had spent the recent years attracting political attention and raising public awareness in order to secure support for and to implement disaster mitigation activities. In some cases, this process was hindered by a lack of high-level political representation or participation in the committee, or the too scientifically oriented composition and aim of the committee.

39. A large number of countries recognized that when a national committee was officially established, with appropriate inter-sectoral composition, and serving as an advisory body to and intervening in the decision-making process of Governments, natural disaster mitigation would be eventually integrated in the formulation of national socio-economic plans and their implementation. It was considered that this would pave the way for a comprehensive approach to natural disasters, from relief measures to sustainable development.

40. The inclusion of disaster management strategies and projects in the national development plans, as reported by 27 countries, is an indication of the growing political awareness and the acceptance by political leaders and Governments of the importance and cost-effectiveness of natural disaster reduction activities.

41. In their reports, most developing countries expressed great expectations concerning the outcome of the World Conference on Natural Disaster Reduction as a means of gaining more support - both political and financial - nationally, internationally and bilaterally.

42. The shortage of funds, and lack of technical assistance and know-how, were considered by most developing countries to be the major reason for the delay in progress in the formulation of comprehensive disaster reduction plans, the improvement of comprehensive disaster management, risk assessment and disaster reduction engineering undertakings.

43. Achievement of the aims of the International Decade for Natural Disaster Reduction requires all components of the international community providing bilateral disaster assistance to take a proactive stance in order to reduce the threat before disasters strike. A variety of organizations are already engaged in cooperative international efforts aimed at natural disaster reduction. These programmes include the provision of assistance to disaster-prone countries in the development of warning systems, and mitigation capabilities and the capacity to assess their vulnerability to natural hazards. While these are significant and important programmes, they represent only a small portion of foreign assistance for disasters.

44. Although the benefits of reducing the impact of disasters to achieve sustainable economic development strategies are increasingly recognized by policy-makers as well as disaster and development experts, disaster reduction measures are not incorporated into most externally sponsored development programmes.

45. Some developing countries drew attention to the difficulties they face in acquiring access to and in influencing existing international and bilateral resources with regard not only to post-disaster relief but also support for disaster reduction projects. Increased efforts, therefore, are needed to demonstrate the cost-effectiveness of investments in disaster mitigation efforts and to ensure that the concept of vulnerability is taken into account in all activities as an explicit objective in line with all the other targets recommended for development projects. Bearing this in mind, there is a need to further explore appropriate and effective intervention strategies for disaster prevention and mitigation together with the humanitarian and emergency assistance efforts which are growing increasingly throughout the world. To meet the aims of the International Decade for Natural Disaster Reduction, prevention, mitigation and preparedness activities must be assigned priority within overall disaster and development assistance programmes.

Review of the International Decade for Natural Disaster Reduction

46. National committees and focal points were requested to review activities for the International Decade on Natural Disaster Reduction and accomplishments so far made, and to suggest modifications and improvements for the second half of the Decade.

47. The Decade was viewed by several countries as a very valuable instrument for increasing awareness of the need and usefulness of disaster reduction activities in developing countries.

48. The three targets of the Decade to be reached by the year 2000 are clearly set; according to the national reports, only the momentum to achieve them is lacking. This was considered due to the fact that, to a great extent, countries and international organizations are not yet convinced that to meet those targets, disaster mitigation activities, with appropriate funding and technologies, must be increased.

49. The lack of resources for the implementation of Decade activities at the national level was emphasized by most of the developing countries and especially least developed countries. Therefore, the establishment of a special fund for the Decade in order to provide support for projects within the International Framework of Action for was recommended. Furthermore, in some reports attention was drawn to a lack of commitment by international organizations, financing institutions and, in particular, the United Nations system in particular towards the achievement of the goals and objective of the Decade. Funding agencies were ready to provide relief assistance after a disaster had occurred but support for preparedness and mitigation activities wa. not easily

obtained by the countries concerned, although it was obvious that supporting disaster reduction activities would result in less need for relief and, therefore, mean savings for donor Governments.

50. It was considered that the role of organizations and programmes of the United Nations system in dealing with natural disaster reduction, and of other international organizations in building capacities to reduce natural disasters, should be increased, or that activities for the International Decade for Natural Disaster Reduction should be assigned a higher priority within the United Nations system. In any case, the achievement of the objectives and goals of Decade should be assigned practical support and resources commensurate with the importance of disaster management in development. In this respect, also emphasized was the need to develop and adopt natural disaster reduction strategies in the framework of the continuum from relief to development, with the necessary support provided by international financing institutions and the international community.

51. It was considered that disaster mitigation programmes should be formulated and implemented at the national level but that direct assistance by the Secretariat or other donors would be required for that purpose. Apparently, activities for the Decade have been confined to the scientific level with no "trickle down" effect to the local and national levels. If direct funding could not be provided by the Secretariat, consideration should be given to highlighting special disaster reduction needs in disaster-prone countries in order to attract international funding. In that respect, mention was made of the technical and natural science criteria that continue to prevail, while basic socio-economic reasons for vulnerability to disasters and the impact of climate change and environmental degradation were not sufficiently taken into consideration.

52. Several small island developing countries emphasized that they would not require the same level of assistance as larger developing countries prone to disasters. Yet, the effects of small contributions could be very significant for them. The provision of assistance, it was considered, should be based on the impact of natural disasters on the already vulnerable economy of a small island developing country, rather than on the size of the population, or the magnitude and the occurrence rate of natural disasters. The international community should increase its understanding of the characteristics and vulnerability of small island developing countries and the impact disasters can have on their efforts at sustainable development.

53. The role of regional cooperation was emphasized by many countries. Sharing of information, methodologies and capabilities and the implementation of joint projects at the regional level and among countries with similar disaster proneness were considered

essential for the achievement of progress in disaster reduction. Regional cooperation was considered to be only partly achieved because of the low level of commitment to natural disaster reduction on the part of regional organizations and Governments. It was therefore important that more efficient and practical cooperation mechanisms among neighbouring countries, as well as partnerships between counterpart organizations in industrialized and developing countries, be developed.

54. The development of a follow-up mechanism for the implementation of the recommendations of the World Conference was requested. The IDNDR Secretariat was urged to be more aggressive in its politics with high-level government officials in order to convince decision-makers of the need for disaster reduction. Furthermore, the Secretariat was requested to work more closely with officials from civil defence and planning ministries in order to integrate disaster mitigation objectives into their activities.

55. As stated before, the proclamation of the International Decade for Natural Disaster Reduction was welcomed in the majority of the national reports under review. The future success of the Decade was, however, considered doubtful if the achievement of its goals and objectives at the national levels, and the national committees and focal points for the Decade, were not more effectively supported.

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WORLD CONFERENCE ON
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ACTIVITIES FOR NATURAL DISASTER REDUCTION

International Decade for Natural Disaster Reduction

Report of the Secretary-General of the Conference

Addendum

Annex I

DISASTERS AROUND THE WORLD: A GLOBAL AND REGIONAL VIEW a/

I. Objective of the Study

One normally has a general perception of the vulnerability of a given country or region to natural disasters. This perception is usually based on the memory of the occurrence in the recent past of one or more disasters there which appeared to be reasonably serious, especially those which received wide press coverage. Thus, the criteria generally used to arrive at such conclusions are often neither quantitative nor objective, and tend not to take into account the long-term history of disasters in the area, nor the degree to which the economies and the populations of the countries in the region can absorb the effects of those disasters.

The overall purpose of the study carried out for this report is to give an objective graphical picture of this critical situation based on historical evidence, and to point out trends in the vulnerability of countries both worldwide and on a regional and subregional basis. In this way it can provide guidance to governments, disaster managers and researchers as to where current problems lie, and to identify future problems where disaster mitigation efforts would be most fruitful. For, as this study illustrates graphically, disaster mitigation efforts in the most vulnerable areas of the world are an essential step in ameliorating the effects of disasters, thus providing a viable platform for continuing sustainable development in those areas.

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* A/CONF.172/1.

a/ The present annex provides a brief summary of the study, full details of which are available to participants as an information report under the same title.

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II. General Considerations

A. Time Span

To obtain a reasonable and statistically significant basis for the study reported here, a 30-year period, from 1 January 1963 to 31 December 1992, was decided upon. All natural disasters which occurred worldwide during this period, and for which sufficient information was available, were included in the study. This data has been analysed to indicate the number of occurrences, their location, and their negative effects. Some of the analysis is global, covering the entire period. In order to distinguish possible trends in the development of disasters within this time span, other statistics are based on an analysis of disasters within each of the six five-year "windows" within this 30-year period. Both worldwide and regional analyses were carried out.

B. Disaster Types/Effects Considered

Only natural disasters are considered in this study (the only possible exception being fires, some of which are man-made and some naturally occurring; because of the difficulty in determining which were the result of strictly natural causes, all have been included). Table 1 gives the types of disasters considered, in alphabetical order, along with their abbreviations as used in the graphs and charts included in this Annex. More than 5,000 disasters were analysed on the basis of date, type of disaster, location, damage caused, number of people affected, and number of deaths caused.

Table 1: Disaster Types

ABBREVIATION	DISASTER TYPE
AVL	Avalanche
CWV	Cold Wave
DRO	Drought
EPI	Epidemic
EQU	Earthquake
FAM	Food Shortage/Famine
FIR	Fire
FLO	Flood
INS	Insect Infestation
LAN	Landslide
HWV	Heat Wave
STO	Storm (Not tropical)
TRS	Tropical Storm (Hurricane, Cyclone, Typhoon)
TSU	Tsunami
VOL	Volcanic Eruption

C. Countries/Regions Considered

Some 195 countries were examined in this study. Sufficient information was available or could be estimated to include more than 5,000 disasters in 179 of those countries. For purposes of analysis, these 179 countries have been grouped into 13 unofficial regions, defined solely for this study. These regions are strictly geographical and are in no way meant to carry any political implications. They were selected exclusively on the basis of common disaster occurrence, in order to give as fine a regional breakdown as possible of the location of the disasters under consideration.

III. Methodology

A. General

Clearly, the overall effect of a disaster on a given country, and its ability to absorb the resulting damage and recover, depends on several factors. Among these, certainly the economy of the country and its population play significant roles. A disaster affecting a certain number of people and causing a certain amount of damage may have a disastrous effect on a country with a small population and a weak economy, whereas a disaster of similar magnitude in another country with a strong economy and a large population might not be considered serious at all. Therefore, in this study three factors were examined for each disaster for which sufficient information was available or could be estimated; namely, damage in relation to the total annual Gross National Product (GNP) of the stricken country, the number of people affected in relation to its total population, and the number of deaths caused.

B. Selection Criteria

Of the more than 5,000 disasters for which information was collected for the study, only those which met certain criteria were considered as "significant" disasters, based on the factors mentioned in the preceding paragraph. Those disasters were grouped into three categories according to three different criteria; namely those which caused significant damage, those which affected a significant percentage of the total population of the stricken country, and those which caused a certain number of deaths. Specifically, disasters were selected for analysis in the three categories according to the following criteria:

Table 2: Disaster Categories/Criteria

CATEGORY	CRITERION
Significant Damage	Damage of 1% or more of total annual GNP
Number of Affected People	1% or more of the total population
Number of Deaths	100 or more

IV. Results of the Study

The major results of the study are summarized and illustrated graphically in the charts and graphs on the following pages. A description of these and some remarks on what results they show follows:

Figure 1 gives the number of significant disasters in the three categories over the 30-year period, broken down into five-year windows. It clearly illustrates an increasing trend of vulnerability to major disasters of all three types worldwide over time.

Figure 2 shows the number of each type of significant disaster in each of the three categories over the entire 30-year period of the study, and Figure 3 shows the percentages of such disaster types in each category. Together they show that floods, tropical storms, drought and earthquakes are the most damaging individually to the economies of the stricken countries; that drought, tropical storms and floods affect the largest numbers of people per disaster; and that floods, tropical storms, epidemics and earthquakes cause the highest numbers of deaths per disaster. Overall they illustrate that floods and tropical storms are the most damaging in that they represent the overwhelming majority of occurrences with significant effects in all three categories.

Figure 4 is a refinement of the information in Figure 2 and Figure 3, showing certain statistical trends. It gives information on the major types of significant disasters in each category, as described in the preceding paragraph. That is, every type of disaster which represents 10 per cent or more of the total significant disaster occurrences over the 30-year period in each category is included. The number of occurrences of each of those types of disasters was plotted over six five-year windows for each category, and the resulting trends which that information represents are computed statistically and illustrated in the graphs for each disaster type and category.

Figure 4 clearly illustrates that the number of floods, tropical storms and drought which cause significant damage have been increasing at a rather steep rate over the six five-year windows of the 30-year period 1963-1992. Significant earthquakes also show a growing trend, but at a rather slow rate of increase. As to disasters which affect a significant number of people, the chart shows that the number of floods and tropical storms responsible for such disasters is also increasing at a rather steep rate, with the number of such droughts increasing much slower. The last of the three charts in Figure 4 suggests a strong trend of increasing epidemics around the world causing 100 or more deaths. A second increasing trend can be discerned in this category for floods, also at a fairly steep rate, but not as steep as for epidemics. On the other hand, the rate of increase for both tropical storms and earthquakes in this category is nearly flat.

Figure 5 is a world map on which has been superimposed the total number of disasters in the three categories over the entire 30-year period for each of the regions defined in the study. In numbers alone, it illustrates that there is no region of the world which is entirely safe from significant

disasters. (Note that the "Worldwide" entry shown was a widespread cholera epidemic in 1970, which caused more than 4,500 deaths in 50 countries; thus, it could not be included in any single region.)

V. Conclusions

Unfortunately, as this study illustrates clearly, both the number and the effects of natural disasters around the world continue to worsen over time. This is especially true among developing countries. For some years now, total annual losses from disasters have exceeded the amount of international assistance available to cope with them. The number of disasters which strike continues to grow. In recent years, the number of persons affected by these disasters has been increasing at the rate of 6 per cent per year, which corresponds to three times the annual population growth. Along with ever-mounting economic losses, the inevitable result is a serious negative impact on sustainable development.

The study shows that the past 30-years have seen a steady and rapid increase in the number of significant natural disasters. The trend is for their number and the magnitude of their effects to continue to increase at a rapid rate in the future, especially for certain types of devastating disasters. This appears to be particularly true, although not exclusively, for floods and tropical storms, both of which cross the boundaries of the types of negative effects which they encumber. The main conclusion of the study, therefore, is that efforts in the area of disaster reduction must be strengthened if there is to be any hope for sustainable development around the world, in developing countries in particular. For, as stated in the objectives, "as this study illustrates graphically, disaster mitigation efforts in the most vulnerable areas of the world are an essential step in ameliorating the effects of disasters, thus providing a viable platform for continuing sustainable development in those areas".

References/Sources:

1. Disaster History, Significant Data on Major Disasters Worldwide, 1900-Present, Office of United States Foreign Assistance (OFDA), Agency for International Development (AID), Washington, August 1993.

2. Disaster Events Data Base, Center for Research on the Epidemiology of Disasters, Catholic University of Louvain, Belgium.

3. World Bank Atlas. Gross National Product, Population, and Growth Rates, World Bank, Washington.

4. Preliminary Study on the Identification of Disaster-prone Countries Based on Economic Impact, UNDRO, Geneva, January 1990.

5. Various statistical documents, Swiss Reinsurance, Switzerland.

6. Various statistical documents, Munich Reinsurance, Germany.

MAJOR DISASTERS AROUND THE WORLD, 1963-1992

Significant Disasters Based on: Damage, Affected Persons, Deaths

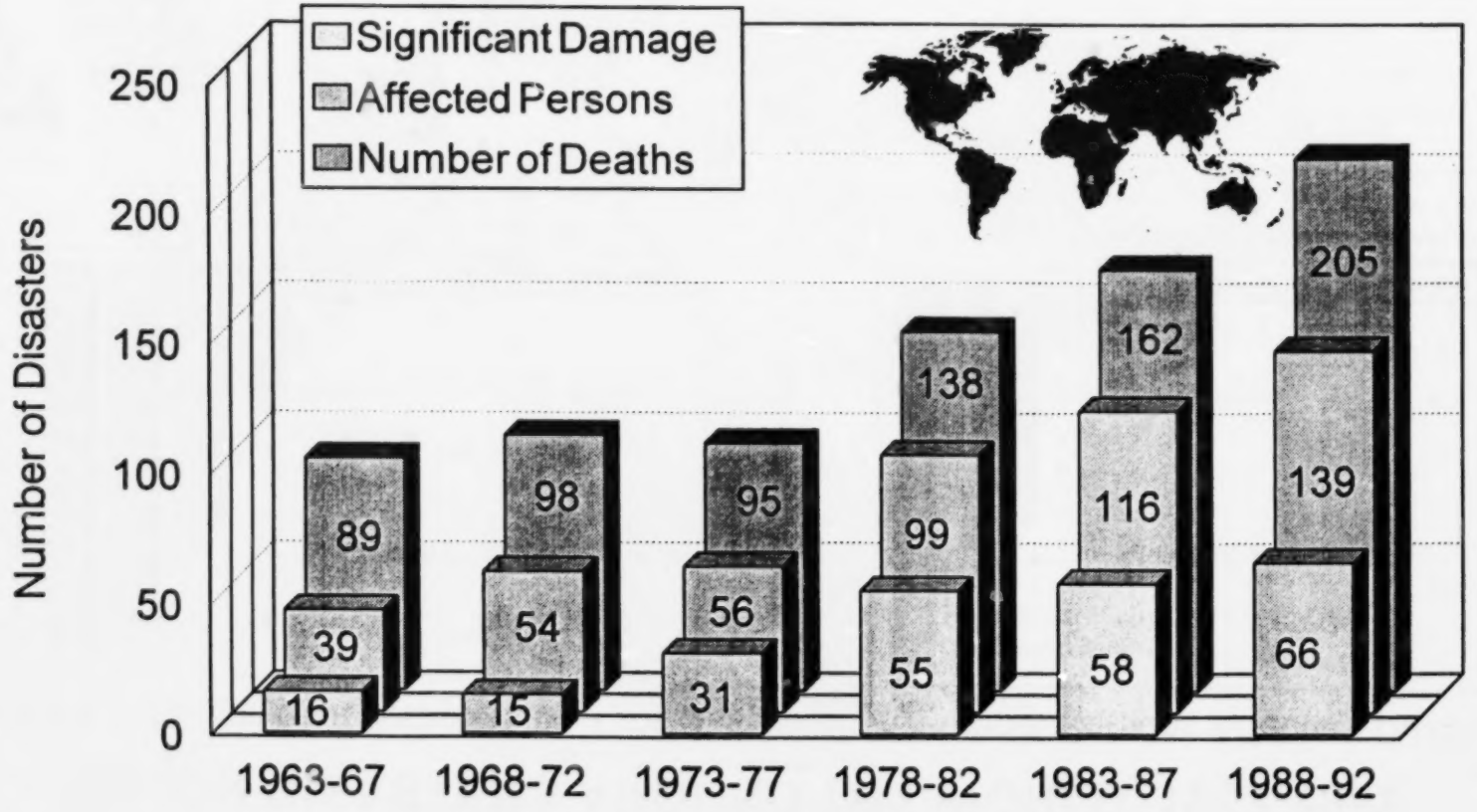
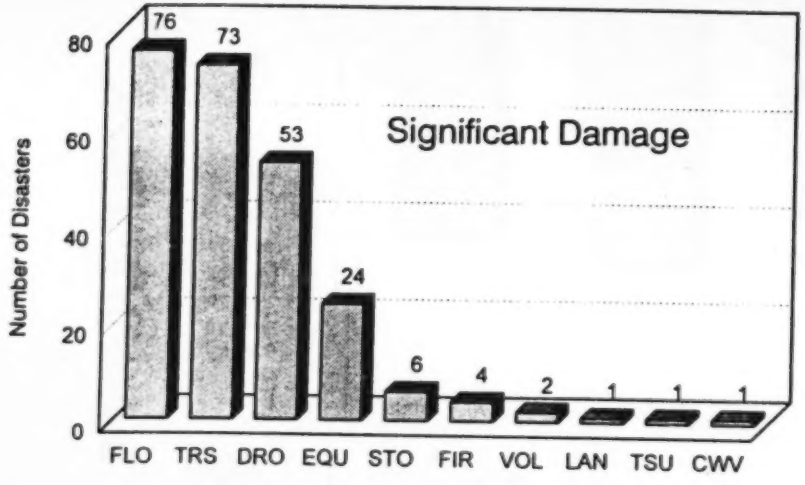
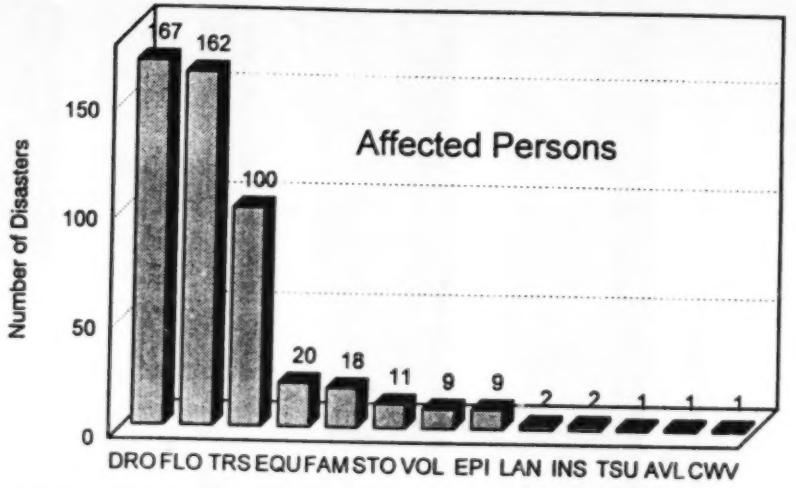


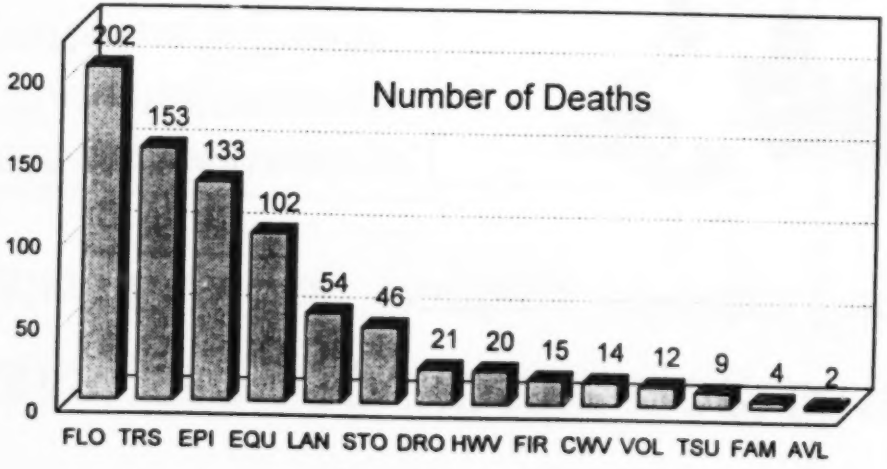
Figure 1

MAJOR DISASTERS AROUND THE WORLD, 1963-1992

Number of Significant Disasters by Type, Based on: Damage, Persons Affected, Deaths







KEY:

FLO = Floods
TRS = Tropical Storms
DRO = Drought
EQU = Earthquakes
STO = Storms, Other
FIR = Fires
VOL = Volcanos
FAM = Famine/Food Shortage
EPI = Epidemic
LAN = Landslide
TSU = Tsunami
AVL = Avalanche
CWV = Cold Wave
HWV = Heat Wave
INS = Insect Infestation

Figure 2

MAJOR DISASTERS AROUND THE WORLD, 1963-1992

% of Significant Disasters by Type, Based on: Damage, Persons Affected, Deaths

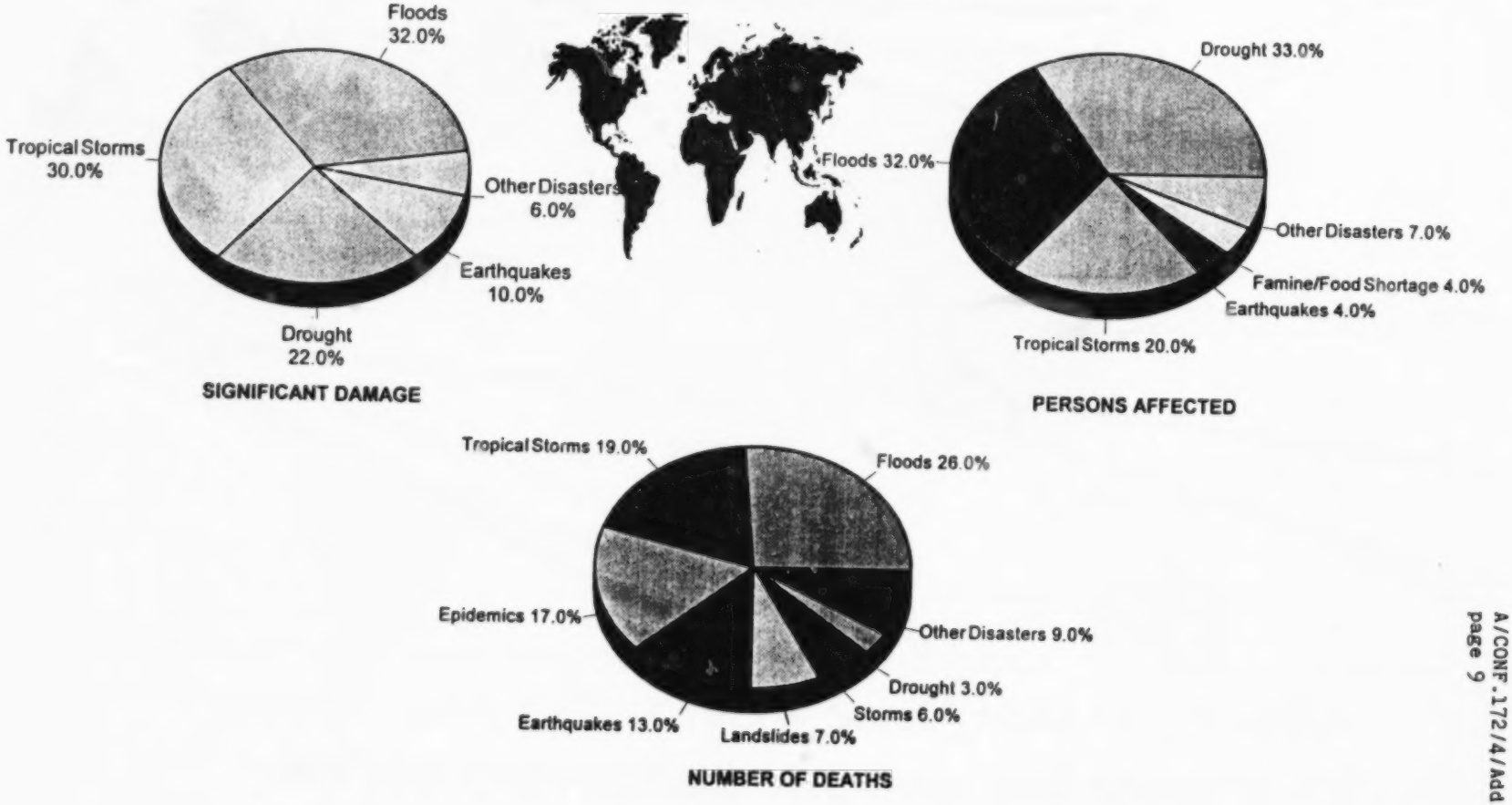
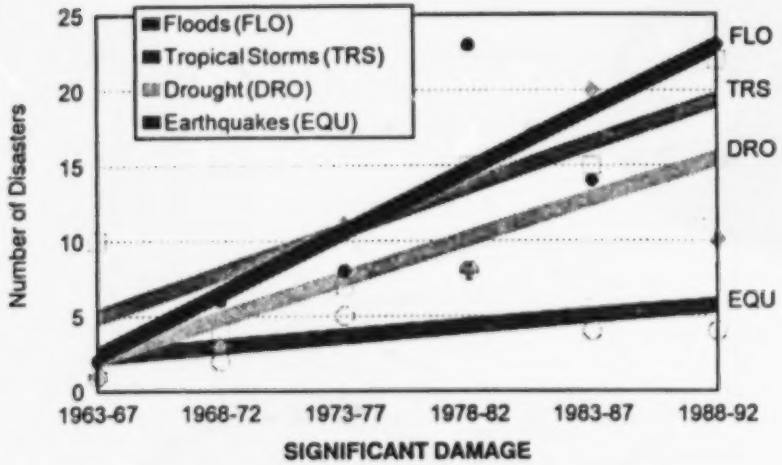
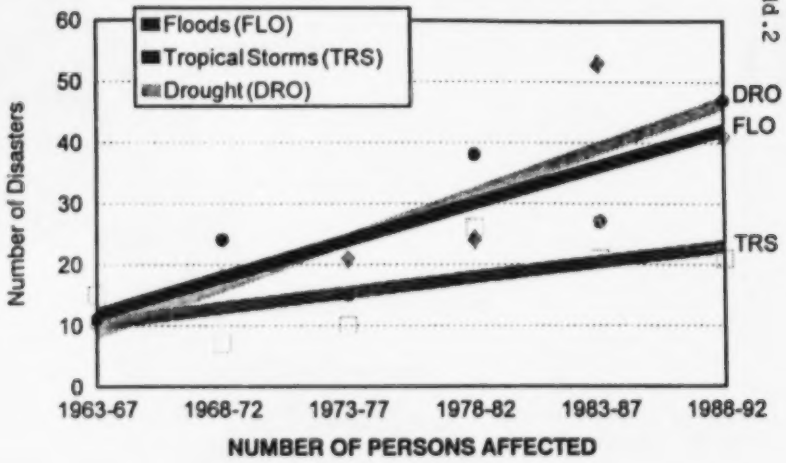


Figure 3

MAJOR DISASTERS AROUND THE WORLD

Trends: Most Significant Disaster Types by Category





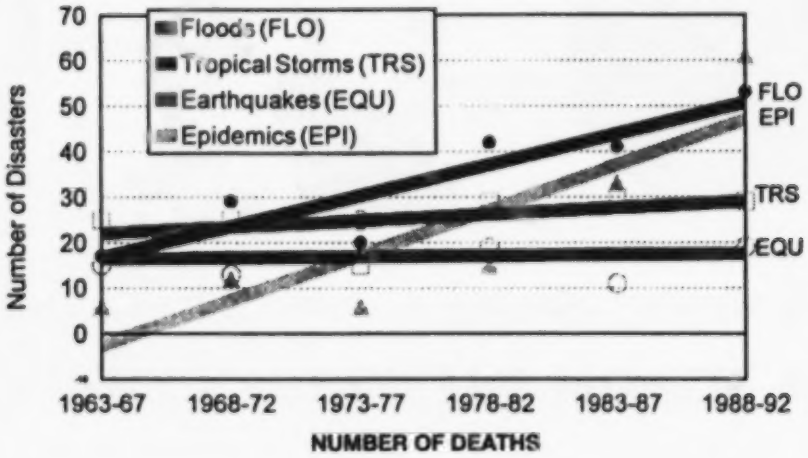


Figure 4

MAJOR DISASTERS AROUND THE WORLD, 1963-1992

Major Disasters by Region, Based on:
Significant Damage (SD), No. Affected (AF), No. of Deaths (ND)

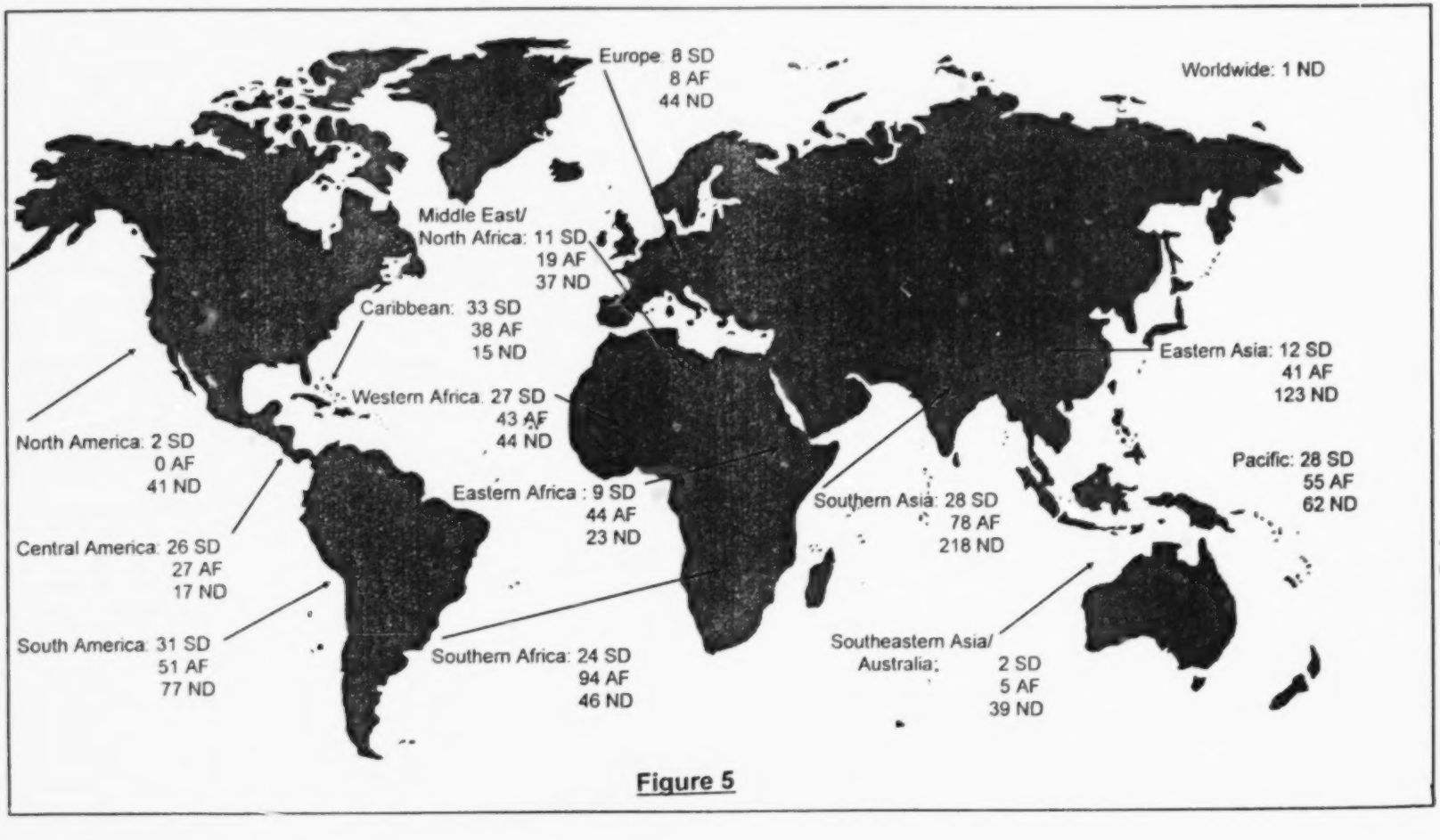


Figure 5

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International Decade for Natural Disaster Reduction

Report of the Secretary-General of the Conference

Addendum

Annex II

DEMONSTRATION PROJECTS a/

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* A/CONF.172/1.

a/ More detailed information on the projects is available in information paper No. 1 (issued in English only).

GE.94-01961 (E)

94-09240

(1) DROUGHTS

(1.1) Drought Hazard Assessment, Famine Disasters and Vulnerable Food Systems
Promoter: International Commission of Scientific Unions (ICSU)/International Geographical Union (IGU)

(2) EARTHQUAKE and TSUNAMI Hazards

(2.1) The Global Seismic Hazard Assessment Program (GSHAP)
Promoter: ICSU/Inter-Union Commission on the Lithosphere (ICL)

(2.2) Minimizing Earthquake Vulnerability

Promoter: International Association of Seismology and Physics of the Earth's Interior (IASPEI)

(2.3) Reconditioning of Existing Adobe Housing to Mitigate Earthquake Effects
Promoter: Centro Regional de Seismologia para America del Sur (CERESIS)

(2.4) Cooperative Project for Seismic Risk Reduction in the Mediterranean Region (SEISMED)
Promoter: Department of Humanitarian Affairs of the United Nations (DHA-Geneva)

(2.5) World Seismic Safety Initiative (WSSI)
Promoter: International Association for Earthquake Engineering (IAEE)

(2.6) Earthquake Risk Reduction in Ghana, West Africa
Promoter: University of London and the Government of Ghana

(3) FLOODS AND STORMS

(3.1) Tropical Cyclone Disasters
Promoter: ICSU/World Meteorological Organization (WMO)

(3.2) Tropical Cyclone Warning System for the South-West Indian Ocean Region
Promoter: WMO

(3.3) Floods and Storms - the Bangladesh Case Study
Promoter: International Union of Technical Associations and Organizations (UATI)

(4) VOLCANOES

(4.1) Reducing Volcanic Disasters in the 1990s
Promoter: ICSU/International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)

(4.2) International Mobile Early-Warning System for Volcanic Eruption (IMEWS)
Promoter: United Nations Educational, Scientific & Cultural Organization (UNESCO), United Nations Environment Programme (UNEP), and World Organization of Volcano Observatories (WOVO)

(5) OTHER NATURAL HAZARDS

(5.1) Special Case Studies: the Lake NYOS menace reduction
Promoter: UATI

(6) PUBLIC HEALTH

(6.1) Disaster Mitigation in Hospital Facilities in Latin America and the Caribbean
Promoter: World Health Organization (WHO)/Pan-American Health Organization (PAHO)

(6.2) Mapping Health Emergency Preparedness and Response in Africa
Promoter: WHO/United Nations Children's Fund (UNICEF)

(6.3) Improved Health Surveillance for more Effective Disaster Response
Promoter: WHO

(6.4) Strengthening Health Sector Disaster Preparedness and Response in Indonesia
Promoter: WHO

(6.5) SUMA: A Supply Management Project in the Aftermath of Disaster in Latin America and the Caribbean
Promoter: WHO/PAHO

(6.6) Community Emergency Preparedness Manuals
Promoter: WHO, ICDO, and International Federation of Red Cross (IFRC)

(7) RESEARCH CENTER

(7.1) The International Center for Research and Training in Mitigation of Natural Hazards in Morocco
Promoter: The Government of Morocco, UNESCO

(8) TRAINING and TECHNOLOGY TRANSFER

(8.1) Disaster Management Training Programmes (DMTP)
Promoter: United Nations Department of Humanitarian Affairs (DHA), United Nations Development Programme (UNDP)

(8.2) System for Technology Exchange for Natural Disasters (STEND)
Promoter: WMO

(8.3) Training Material for Disaster Reduction
Promoter: UNESCO

(8.4) The IDNDR Roving Seminar
Promoter: World Federation of Engineering Organizations (WFEO)-UATI

(9) RISK ASSESSMENT AND PREVENTIVE ACTIONS

(9.1) The Physical Instability of Megacities
Promoter: International Association of Engineering Geology (IAEG)

(9.2) Megacities Protection and Constructions
Promoter: WFEO-UATI

(9.3) Design of Structures to Withstand Earthquakes and/or Extreme Winds
Promoter: WFEO-UATI

(9.4) Comprehensive Risk Assessment
Promoter: WMO

(9.5) Natural Hazards Map of East Asia
Promoter: Geological Survey of Japan (GSJ)

(9.6) Implementation of Available Know-How for the Protection of Non-Engineered Housing from Natural Hazards
Promoter: Professor Arya, a member of the STC of IDNDR

(9.7) Atlas of Local Seismic Culture
Promoter: European University Center for the Cultural Heritage-RAVELLO

(10) INFORMATION

(10.1) Disaster Statistics; Disaster History Database
Promoter: DHA-Geneva

(10.2) The IDNDR/UNDRO Terminology Project
Promoter: The former UNDRO and IDNDR Secretariat

(10.3) International Emergency Readiness and Response Information System (IERRIS)
Promoter: Free University of Netherlands

(11) SOCIO-ECONOMIC IMPACT

(11.1) Socio-Economic and Policy Aspects of Changes in Incidence of Extreme Weather Events
Promoter: Vrije Universiteit, Amsterdam, The Netherlands, University of Oxford, United Kingdom, Aristotelian, University of Thessaloniki, Greece.

<u>Projects under Review for Endorsement as IDNDR Projects</u>

(12.1) Emergency Management, Environment Risk-Technology and Education Center
Promoter: Tecnopolis CSATA of Italy

(12.2) High Resolution Observing Satellite
Promoter: Science and Technology Agency of the Japanese Government and National Space Development Agency (NASDA)

(12.3) Remote Sensing Methods and Workstation for Serious Natural Disasters
Promoter: Technical Research Center of Finland and State Science (VTT) and Technology Commission of China

(12.4) Protection of Environment and Control of Emergencies
Promoter: AERITALIA

(12.5) Development of Regional Training Programme for Disaster Management (Risk Sciences)
Promoter: Council of Europe, UNESCO

(12.6) Post-Earthquake Evaluation Programme
Promoter: Council of Europe, UNESCO

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ACTIVITIES FOR NATURAL DISASTER REDUCTION

International Decade for Natural Disaster Reduction

Report of the Secretary-General of the Conference

Addendum

Activities of bodies of the United Nations system and other international organizations in support of the Decade

I. INTRODUCTION

1. The General Assembly, in resolution 44/236, urged the organs, organizations and bodies of the United Nations system to accord priority, as appropriate and in a concerted manner, to natural disaster preparedness, prevention, relief and short-term recovery including economic damage and risk assessment in their operational activities. The Secretary-General was requested, in this regard, to ensure that adequate means are made available to the Office of the United Nations Disaster Relief Coordinator.

2. United Nations resident coordinators and the field representatives of the United Nations system were requested to work closely and in a coordinated manner with Governments to achieve the objective and goals of the Decade. The regional commissions of the United Nations were also urged to play an active role in implementing the activities of the Decade, as natural disasters often transcend national boundaries.

3. Scientific and technological unions, financial institutions, including banks and insurance companies, and industrial enterprises, foundations and other non-governmental organizations were encouraged to support and participate fully in the programmes and activities of the Decade prepared and implemented by the international community, including Governments, international organizations and non-governmental organizations.

II. INTER-AGENCY STEERING COMMITTEE

4. The Inter-Agency Working Group (IAWG) of the Steering Committee of the Decade, established by the Secretary-General in 1988 for coordination of the United Nations system's Decade-related activities, has served as information sharing and consultation mechanism for the agencies' action programmes. It should be noted that membership of the Steering Committee and the IAWG includes agencies with mandates in disaster reduction, such as WMO, UNESCO, UNIDO, ITU and others, and is thus different from the Inter-Agency Standing Committee established more recently for coordination of humanitarian assistance programmes.

5. Seven meetings of the Steering Committee and sixteen meetings of the IAWG have been held since the establishment of the Committee, including four meetings of the IAWG in 1993 and 1994 in preparation for the World Conference on Natural Disaster Reduction. In addition to the traditional participation of the agencies of the United Nations system, a number of non-governmental and scientific organizations such as the International Federation of Red Cross and Red Crescent Societies (IFRC), the International Council of Scientific Unions (ICSU) and the World Federation of Engineering Organizations (WFEO), have joined in the meetings of the IAWG, and assumed substantial responsibility in organizing the scientific and technical programme of the World Conference.

6. The contribution of the Steering Committee and IAWG to the Decade and to the Conference is well illustrated in the following summary reports of their Decade-related activities. Reports from other actively contributing Decade partners are also included in this addendum.

III. ACTIVITIES OF THE UNITED NATIONS SYSTEM

A. Department of Humanitarian Affairs of the Secretariat

7. The activities of the Department are reported upon in the report of the Secretary-General on the strengthening of the coordination of humanitarian emergency assistance of the United Nations (A/48/177-E/1994/80). A further report on the activities of the Department in disaster mitigation is contained in the report of the Secretary-General of the Conference (A/CONF/172/4 and Add.1 and 2).

B. Department for Economic and Social Information and Policy Analysis of the Secretariat

8. In the field of statistics, the Department, in collaboration with the World Bank, the IMF, OECD and Eurostat, will shortly be issuing the System of National Accounts 1993 (SNA). This publication represents a major advance in national accounting, with one of the many new elements dealing specifically with changes in the values of assets, liabilities and net worth as a result of destruction, by war or other political events, or by natural catastrophes. Another section of the SNA, reporting on catastrophic losses, identified such events as major earthquakes, volcanic eruptions, tidal waves, exceptionally severe hurricanes,

drought and other natural disasters, acts of war, riots and other demonstrations due to political events, and technological accidents, such as major toxic spills or release of radioactive particles into the air. Included here are such major losses as deterioration in the quality of land caused by abnormal flooding or wind damage, destruction of cultivated assets by drought or outbreaks of disease, destruction of buildings, equipment or valuables in forest fires or earthquakes, and the accidental destruction of currency or bearer securities as a result of natural catastrophe or political events.

9. The economic and environmental impact of natural disasters within the SNA framework has been further elaborated in another study recently published by the Department, entitled "Integrated Environmental and Economic Accounting".

C. United Nations Children's Fund

10. Throughout the 1990s UNICEF has been increasingly involved in emergencies. During the past few years, in addition to its involvement in a number of high-profile complex emergencies such as Somalia and the former Yugoslavia, UNICEF has also provided emergency assistance to countries affected by natural disasters and health emergencies. These events have included floods in Ecuador, Lebanon, Pakistan and Paraguay; earthquakes in India, Egypt, Indonesia, Pakistan and Turkey; an outbreak of cerebrospinal meningitis in Cameroon; cholera in Mozambique, Peru and El Salvador, and volcanic eruptions in the Philippines and also Nicaragua, where the damage was compounded by a tidal wave or tsunami. Persistent drought affected some 13 countries in Africa, putting around 22 million people, mainly children and women, at risk of starvation and disease.

11. In the context of natural disasters, the main responsibility of UNICEF is to reduce the vulnerability of children and women, and of the families and communities that they depend on. UNICEF also has a responsibility to ensure an awareness of the potential impact of disasters, and the possibility of mitigating the effects through the adoption of disaster prevention and preparedness measures, essential if vulnerability to future disasters is to be reduced. All UNICEF development programmes should incorporate disaster measures so that those children and women most at risk can be specially targeted.

12. Given the interrelationship between emergency and development programmes, policy regarding natural disasters is an integral part of UNICEF programmes in general - aiming to enhance both child survival and development. Recognizing that children are the most vulnerable group in times of disaster, it is necessary to ensure that the goals of the 1990 World Summit for Children are incorporated into all emergency programme plans.

13. As part of its policy for promoting objectives of the Decade in mitigating disasters, UNICEF activities through government counterparts, NGOs and other partners aim at enhancing the following issues: awareness of hazards, vulnerability and risk, the capacity to cope, and disaster response.

14. UNICEF has been actively promoting the ideals and objectives of the Decade by encouraging its field offices to support national government initiatives and awareness campaigns. At the World Conference, UNICEF participated in the

organization of the session on "Vulnerable communities" by presenting two case-studies on Bangladesh and South Africa.

D. United Nations Development Programme

15. UNDP has chaired the working group on "Relief to development continuum" established by the Steering Committee.

16. Through its network of field offices, and with headquarters support, UNDP has been heavily involved in reconstruction and rehabilitation work in countries affected by both natural disasters and complex emergencies. Recovery projects aimed at addressing problems of drought, floods, earthquakes, volcanic eruptions or typhoons have been successfully implemented.

17. Effective from 1 June 1993, UNDP has issued new financial, administrative and personnel procedures in natural disaster and emergency-related activities. These improved guidelines will facilitate the Resident Coordinators'/Resident Representatives' access to financial support for his coordination activities and provide funds speedily to dispense cash grants which provide the flexibility to meet critical gaps very early in the relief phase following a natural disaster. The Administrator has formed a group of eminent consultants to prepare a study on UNDP's role in the relief to development continuum.

18. The Disaster Management Training Programme, co-managed by UNDP and the Department of Humanitarian Affairs (DHA), is a national and international disaster mitigation and capacity-building mechanism. This programme, with the assistance of professional disaster management institutions, has developed sophisticated and well-structured training modules that cover the major categories and phases of natural disasters and complex emergencies. Since its inception in 1991, trainers from UNDP, the Department of Humanitarian Affairs and United Nations organizations have had their skills upgraded and six regional cooperating institutions now implement training programmes as executing agencies. Workshops have been attended by participants from national governments, non-governmental organizations, United Nations organizations, regional institutions and bilateral donors. Follow-up projects, with support from UNDP's Special Programme Resources, are being implemented.

19. The first phase of the Training Programme is coming to an end in mid-1994. A mid-term review and an internal evaluation has been completed. UNDP and DHA staff, together with a team of international experts, is currently preparing the second phase of the programme. Over the past year, UNDP and DHA have broadened their DMTP partnership and included UNICEF, WFP, UNHCR, WHO and FAO in the design and formulation of the next phase of the programme.

United Nations Volunteers

20. In the last decade, UNV specialists have served extensively with United Nations agencies in the provision of humanitarian assistance. Almost 1,000 United Nations specialists have worked in the areas of emergency relief, reconstruction and rehabilitation and disaster preparedness.

21. Concerning natural disaster preparedness and mitigation, UNV is exploring the scope for joint programmes with regional, subregional and national disaster management centres, as well as support to National Committees established for the IDNDR, in collaboration with UNDP and DHA.

22. UNV specialists in various aspects of disaster preparedness and mitigation have worked over the years to support institutions developing and implementing data-gathering and analysis programmes, e.g. epidemiological surveys, in early warning systems, or introducing new methods of construction for low-cost earthquake-resistant homes in Yemen, or storm-resistant housing in the Cook Islands, etc.

23. Working out of such institutions, UNV specialists help direct attention to the needs for low-cost disaster prevention/mitigation measures at municipal and community levels in disaster-prone countries, using appropriate technologies, and focusing on the most vulnerable low-income communities.

24. Similarly, UNV specialists and UNV field workers work to strengthen the technical and managerial capacity of local NGOs and community-based organizations in many countries. Under UNV's Participatory Development Programme for strengthening community-based organizations, UNV specialists are active in a number of African and Asian countries, facilitating subregional exchange of experience between experienced grass-roots volunteer development workers.

25. Increasingly, volunteers could generate data on disaster preparedness at country and municipal levels for the International Decade for Natural Disaster Reduction, and at the same or a subsequent stage, support the percolation of disaster management training to subnational level and community level.

E. United Nations Population Fund

26. UNFPA is currently finalizing a policy guideline that will set out the areas for UNFPA assistance in emergency and continuing relief situations. The main focus will be the family planning and reproductive health needs of women and adolescents.

27. In spite of the absence of policies, in the past, UNFPA has nevertheless responded in a number of cases to urgent requests of such assistance made in instances of major natural disasters. For instance, UNFPA has provided assistance for reconstruction in the aftermath of the typhoon which affected the two provinces of Anhui and Fujin in China in 1991, and after the earthquake in Maharashtra, India, in September 1993.

28. UNFPA has not directly been involved in disaster management capacity-building. However, UNFPA participated in such activities when they were organized under the Joint Consultative Group on Policy (JCGP), but has not been directly involved either with the organizational, or with the financial arrangements in support of the Decade.

F. United Nations Environment Programme

Centre for Urgent Environmental Assistance

29. The Centre for Urgent Environmental Assistance was established for an experimental phase of 18 months and was reviewed and extended by the Governing Council of the United Nations Environment Programme (UNEP) in 1993. Its primary objective is to complement, harmonize and strengthen the international response capacity to environmental emergencies.

30. One of the most important products of the Centre's work during the experimental period has been the preparation of a draft framework for a United Nations environmental emergency plan, as an aid in identifying precise roles and responsibilities, so as to ensure rapid and effective response in time of emergency. A provisional network of national focal points has also been established, representing all global regions and serving as a base on which to build the international response capacity to environmental emergencies.

31. The evolution of the Centre as integrated into the Department of Humanitarian Affairs in the United Nations system for information on and for the coordination of environmental emergencies is being finalized. For the World Conference, the Centre organized the Technical Committee session on Interrelationships between Technological and Natural Hazards.

G. United Nations Centre for Human Settlements (Habitat)

32. In order to enhance the capacity of professionals and Governments to integrate disaster mitigation considerations into their human settlements planning, development and management efforts, and to ensure that post-disaster reconstruction and rehabilitation activities are development oriented, the United Nations Centre for Human Settlements (Habitat) has not only kept up the pace but even extended its assistance and activities in those areas.

33. In collaboration with the World Bank and UNDP, Habitat is developing an interregional project on the reduction of vulnerability to natural or technological disasters in metropolitan areas. That project is one of the recognized international demonstration projects for the Decade. The four selected metropolitan areas for the initial case-studies are located in Brazil, the Philippines and Turkey. Due to the interest also expressed by other Governments, additional funding is being sought to expand the project.

34. In the area of seismic disasters, Habitat has been particularly active in providing technical assistance for reconstruction: Panama, Costa Rica, Iran, Nepal, the Philippines and Jamaica. In Algeria, Habitat is assisting the National Centre for Applied Research in earthquake engineering to strengthen national technical capacity. A video film and a publication on mitigating the effects of earthquakes on human settlements have been prepared and distributed world wide.

35. In the area of flood mitigation, assistance has continued to be provided to Bangladesh and Pakistan. With regard to landslides, Habitat is assisting Sri Lanka with hazard analysis and mapping.

36. In the area of hurricanes, typhoons and cyclones, Montserrat is receiving assistance from Habitat for post-hurricane rehabilitation of housing, including longer-term institutional arrangements. As a follow-up to those efforts and at the request of the Organization of Eastern Caribbean States (OECS), Habitat and UNDP have produced a film on hurricane-resistant construction, based on the Montserrat experience, supplemented by a construction manual used in training seminars.

37. Habitat is providing assistance to the areas of Belarus affected by the Chernobyl nuclear power plant accident. The main expected outcome is a revised comprehensive scheme for the territorial development of Belarus.

38. As part of its research and operational activities and as a contribution to the Decade, Habitat has produced a publication entitled Planning and Management for Disaster Reduction.

H. United Nations Centre for Regional Development

39. UNCRD has been undertaking regional development programmes related to disaster reduction even before IDNDR started. International Seminars on Regional Development Planning for Disaster Prevention were held from 1986 to 1989. The focal point of the seminars was vulnerability assessment of disasters caused by earthquakes, floods and volcanoes.

40. Efforts have been made to solve concrete issues by setting up clearer objectives since the Decade was initiated. These efforts are international research and training seminars such as: (1) The Socio-Economic Impacts of Disasters, 1990; (2) Information Flows in Disaster Management of Metropolitan Areas, 1991; and (3) Training and Education for Improving Earthquake Disaster Management in Developing Countries, 1992.

41. Collaborative research projects with particular countries and regions are continuously being conducted. These include: (a) a training programme on earthquake engineering and disaster management for establishing a building administration system in the Philippines, in collaboration with the United Nations, the World Bank, United Nations Development Programme (Philippines), and the Government of the Philippines, 1991-1993; (b) seminars and workshops for development of modules for training on integrated approach to disaster management and regional/rural development planning in Bangladesh, in collaboration with the Centre on Integrated Rural Development for Asia and the Pacific (CARTOP), 1990-1993; and (c) International Workshop on Regional Disaster Management in the Latin American Region, 1991. The "IDNDR Aichi/Nagoya International Conference" was held in 1993 and focused on disaster management in metropolitan areas for the twenty-first century. For the World Conference, UNCRD organized the Technical Committee session on Effects of Disasters in Modern Societies.

I. United Nations Conference on Trade and Development

42. The Programme of Action for the Least Developed Countries for the 1990s, adopted by the Second United Nations Conference on LDCs held in Paris in 1990, specifically addressed the question of disaster mitigation, preparedness and prevention in LDCs. Noting that natural disasters continue to cause heavy losses of human lives and property, with particularly severe and lasting impact on the national economies of LDCs, the Programme of Action emphasizes the need for adoption of measures by LDCs, with appropriate international support.

43. As the focal point for the review and follow-up of progress in the implementation of the Programme of Action at the global level, the UNCTAD secretariat has included in its analytical work the question of natural disasters and their impact on social and economic performance in LDCs.

44. Following General Assembly resolution 47/212 B regarding the restructuring of the economic and social sectors of the United Nations, the programmes of the former United Nations Centre on Transnational Corporations were integrated within the UNCTAD secretariat in 1993.

45. An important part of the work to be undertaken deals with the acquisition, transfer, absorption, diffusion and development of environmentally sound technologies. Availability of such technologies to all countries, and in particular to developing countries, would in addition enable them to undertake appropriate measures for the assessment, prediction, prevention and mitigation of natural disasters.

J. Food and Agriculture Organization of the United Nations

46. The support provided to the Decade is in the context of FAO's constitutional role in all matters related to food and agriculture, in particular, its mandate for the development, utilization and conservation of natural resources. Many, if not most, of FAO's technical capabilities and assistance activities are relevant to rational management of natural resources, and relate to natural disaster assessment, prevention, preparedness, mitigation, relief and rehabilitation.

47. The issues of drought and desertification have been high on FAO's agenda for many years and to these can be added other disasters directly related to the management of natural resources, such as floods and landslides. Establishing means to control plagues of grasshoppers and locusts also are clearly within FAO's mandate. Unfortunately, the Decade itself has not generated additional funding to the participating agencies.

48. FAO has participated actively in the preparation of the World Conference, developing the technical session on "drought management" in collaboration with WFP and IFAD. FAO also has been participating in the DHA/UNDP Disaster Management Training Programme since 1993 through contributing staff selected from such units or services as the Office of Special Relief Operations (OSRO) or the Global Information and Early Warning Service, as potential trainers of trainers.

49. On a global scale, FAO is contributing to increasing preparedness for natural disasters by operating the Global Information and Early Warning System (GIEWS). The System's principal objectives are to continuously monitor food supply and demand conditions, identify countries or regions where food shortages are imminent, and assess possible emergency food requirements. The System is particularly useful in predicting the impacts of slow-onset disasters such as droughts, while enabling member countries and the international community to respond appropriately and speedily to other natural disasters as well. The World Meteorological Organization and the World Health Organization also contribute data.

50. For Africa and some adjacent countries, GIEWS uses extensively satellite-based data for monitoring crop growing conditions and to locate potential breeding habitats of desert locusts. FAO has established a unique space-based monitoring system, called ARTEMIS (Africa Real Time Environmental Monitoring Information System) to monitor weather conditions and vegetation cover in Africa, the Near East and southwest Asia. The onset of drought conditions, for example, can be detected at early stages. A number of users, including regional and national food security and early warning systems, receive ARTEMIS data on a regular basis. Such systems have been established with the assistance of FAO in about 40 countries. Another major application of ARTEMIS data is the detection of potential breeding locations of the desert locust.

51. With regard to disaster response, through the activities of OSRO, mentioned above, FAO is involved in the rehabilitation of disaster affected areas in providing seeds, agricultural tools and veterinary supplies and equipment. Upon requests of affected member nations, FAO provides advice on appropriate action and logistics, and solicits and coordinates donor support to them.

52. FAO pursues within its mandate on a regular basis and in a large number of field projects, activities that have a bearing on protecting lands against natural disasters or rehabilitating disaster hit areas.

K. United Nations Educational, Scientific and Cultural Organization

53. UNESCO has actively participated in the Decade's Steering Committee and Inter-Agency Working Group. Two international demonstration projects - (a) Training Material for Disaster Reduction and (b) International Mobile Early-Warning System for Volcanic Eruptions - are carried out by UNESCO.

54. UNESCO is engaged in the assessment and mitigation of risk arising from natural hazards of geological origin (earthquakes, tsunamis, volcanic eruptions and landslides), and contributes to the study of hazards of hydrometeorlogical origin (storms, floods, prolonged droughts, desertification and avalanches). The IDNDR presented UNESCO with the opportunity to focus and align its programme with the goals and objectives of the Decade.

55. The main activities undertaken include the establishment of international, regional and national centres, systems and networks for the exchange and analysis of earthquake data and training; the identification of seismically

active zones and the quantitative assessment of the earthquake hazard in those zones; and field studies of the effects of large earthquakes. National seismological observatory networks have also been created by UNESCO in a number of countries.

56. The Intergovernmental Oceanographic Commission (IOC) of UNESCO is the organization through which international cooperation in tsunami warning is made. Its International Tsunami Information Centre (ITIC), located in Honolulu, works closely with the Tsunami Warning System in the Pacific. IOC has produced training materials on protection against tsunamis, including pamphlets to schoolchildren.

57. Field studies of catastrophic floods are made by UNESCO scientific missions. Studies on droughts and desertification are also undertaken in the framework of IHP and the Man and Biosphere (MAB) Programme.

58. UNESCO has helped member States to deal with the problems that sudden natural hazards present for school buildings. Emphasis is laid on practical advice for building schools that will be relatively safe if a natural disaster occurs.

59. UNESCO has participated in the operations undertaken to safeguard cultural heritage, monuments, sites and property against hazards.

60. In the aftermath of natural disasters, and at the request of member States affected, UNESCO has made post-disaster interventions aimed at investigating and introducing transitional actions to draw lessons from the event, to propose and sometimes execute measures for reducing the impacts of the disaster as well as losses from any future event, and for developing human resources as a catalyst for recovery and national self-reliance. The purpose is also to fill the gap between emergency relief operations and the long-term recovery and rehabilitation action.

61. UNESCO actively participated in the World Conference, assuming the overall responsibility of organizing the Scientific and Technical Poster session and co-organizing with WMO the Technical Committee on Warning Systems.

62. The Decade presents UNESCO with a unique opportunity to capitalize on the strength of its past and present activities in designing its future contribution to natural disaster reduction, so that continuity should be combined with change.

L. World Health Organization

63. The World Health Organization has been one of the Decade's strongest supporters because the Decade provides WHO with an additional opportunity to promote health sector preparedness capacities of member States. Since the Decade was launched, WHO has adopted a formal programme for the Decade in 1990. Extensive regional programmes have been adopted and implemented by WHO Regional Offices, particularly its Regional Office for the Americas, where activities

have gone far beyond preparedness to encompass disaster mitigation for hospitals and water and sanitation facilities.

64. Regarding preparations for the World Conference, WHO helped organize main committee sessions. WHO headquarters organized a session on the topic "From disaster management to sustainable development: how the public sector, private sector and voluntary organizations can work together". WHO's Regional Office for the Americas organized two sessions on regional reports. WHO and its regional offices vigorously promoted the conference to health ministries the world over. Building up to the World Conference, WHO's Regional Office for the Americas held regional meetings of IDNDR National Committees in Guatemala for Latin America (1991) and in Jamaica for the Caribbean (1992), sponsored 30 participants from the region to attend the Inter-American Conference on Natural Disaster Reduction (Colombia, 1994), and prepared a comprehensive report on the evolution of disaster management in the region. WHO's Pan-African Centre for Emergency Preparedness and Responses in Addis Ababa organized several meetings in Africa with experts and intergovernmental officials to shape a common African position on emergencies in preparation for the World Conference.

65. In addition, a WHO staff member was seconded to the Decade secretariat on a part-time basis to contribute to public information preparations for the World Conference. Administrative and logistical support was provided by WHO's Regional Office for the Americas to the secretariat subregional officer for Latin America and the Caribbean.

66. WHO is committed to the Decade as it provides a framework for international cooperation to help countries build self-reliance in the face of disasters. It provides a forum to overcome the narrow sectoralism that has often been the hallmark of disaster preparedness and response. It could become a framework to truly coordinate the parallel efforts of disaster preparedness that are under way in countries. It could help define priorities in research and publications, and be a framework for agencies to cooperate in producing them.

M. World Meteorological Organization

67. WMO was involved in the preparatory phase of the Decade from the very outset. In 1990 the WMO Executive Council endorsed a WMO Plan of Action for the IDNDR, which was formally adopted by the WMO Congress one year later.

68. The activities being implemented under this Plan relate to all natural disasters of meteorological and hydrological origin, these accounting for the major part of all injuries, lives lost and property damage from natural disasters. Most of the long-term activities of WMO, in particular under its World Weather Watch and Hydrology and Water Resources Programmes, are geared to aims which are indistinguishable from those of the Decade.

69. These activities include the operation of a global system for the collection, transmission and analysis of meteorological data, as a basis for national Meteorological Services to forecast severe weather conditions well in advance of their becoming a threat to populated areas. Support is also given to efforts by national Hydrological Services in the forecasting of major floods and

droughts. In both cases the data collected can be used to assess the future risk of such events occurring in critical locations. A continuing programme of research and development aims to improve the accuracy and precision of these forecasts and assessments. However, the technology that is already available is capable of making drastic reductions in the toll of life, injury and property damage from the events concerned, it only needs wider application. This requires the installation and maintenance of equipment and the training both of staff and of those who receive and interpret the assessments and forecasts provided.

70. In line with this philosophy, WMO has been implementing three of the Decade's International Demonstration Projects, namely those on "Tropical cyclone warning system for the South-West Indian Ocean region", "System for technology exchange for natural disasters" and "Comprehensive risk assessment". All three projects are based on the transfer and use of tried and tested existing technology. They are being supported by the European Community Development Fund, Japan and Switzerland but, in the case of the latter two projects, their implementation is hampered by a lack of financial resources.

71. In addition to these technical activities, WMO has been pleased to participate in all the various planning meetings for the Decade and has, on more than one occasion, seconded staff to assist in the work of the Decade secretariat. For the World Conference WMO co-organized, together with UNESCO, the Technical Committee session on Warning Systems.

N. World Food Programme

72. The World Food Programme continues to strengthen disaster mitigation aspects of its work, in line with the objectives of the Decade. Much of the development work of WFP over the years has been designed to lessen the impact of emergencies on people in areas prone to natural disasters such as drought and flood, and this has been given a renewed focus in countries where government partners have put a priority on preparedness and prevention.

73. A new project to incorporate vulnerability analysis more closely in WFP programming and targeting of assistance has been set up, and is to be extended to several country programmes in sub-Saharan Africa. Through this means, WFP will give particular attention to household strategies, which are the vulnerable populations' own "prevention" measures, in its assessment of emergency situations and drawing up of appropriate response with recipient countries and NGO partners. Vulnerability analysis and mapping will be done in close collaboration with, and as a complement to, ongoing programmes.

74. Because of WFP's heavy involvement in disaster relief (2.5 million MT of emergency food aid in 1993), the Programme actively promotes the establishment of disaster preparedness structures and early warning systems in all countries prone to recurrent natural disasters. This concerns particularly countries in Sub-Saharan Africa, where drought is the most damaging phenomenon, and in Asia, where floods and typhoons are the major natural disasters to contend with.

75. The majority of emergency food aid currently channelled through WFP is used in "complex" emergencies, in which the adverse effects of natural disasters such as drought are compounded by civil strife. While WFP does not directly fund preparedness structures, the Programme supports them on a wide scale, sometimes with personnel. WFP continues to promote the establishment and strengthening of coordinating bodies, such as the Relief and Rehabilitation Commission in Ethiopia, and a Food Aid Coordinating Unit in Malawi.

O. Economic Commission for Africa

76. Prior to 1993, the contribution of the Economic Commission for Africa to the activities of the IDNDR was indirect. This was effected principally through the provision of technical support to initiatives of the Organization for African Unity (OAU) and by the articulation of Africa's concerns in the preparation for the United Nations Conference on Environment and Development. As part of its contribution to the definition and elaboration of Africa's strategy and programme for the implementation of Agenda 21, the Commission, directly and through its subsidiary cooperating institutions, has provided the intellectual justification for linking natural disaster reduction to the quest for sustainable development in Africa.

77. ECA collaborated very closely and substantively with the IDNDR secretariat in the drafting of the mid-term report for Africa and its annexed country natural disaster profile on the Decade. As the empirical and theoretical basis for the African Common Position, both documents were approved by the African Council of Ministers responsible for Social and Economic Development and Planning in May 1994, as Africa's documents for the Yokohama Conference, by resolution 773 (XXIX). Collaboration between ECA, OAU and the Decade secretariat is expected to continue, actively, in the various subregional workshops planned in Africa for the implementation of the Yokohama Strategy. The above-mentioned resolution requests the Executive Secretary of the Commission to report on the implementation of the Decade at its next annual session.

P. Economic Commission for Europe

78. As part of the work programme of the Timber Committee of the Economic Commission for Europe (ECE), and in order to provide countries with the latest information on forest fire damage, prevention and control, the secretariat of the Timber Committee collects and publishes, annually, statistics on the number, area, causes, value of losses and other aspects of forest fires. It also publishes, biannually, the International Forest Fire News, which is intended to enhance the exchange of information on wildland fire management and sciences. The ECE Timber Committee has also participated actively in the follow-up work to resolution 3, on a decentralized European data bank on forest fires, adopted by the Ministerial Conference on the Production of Forests in Europe, held in December 1990. A seminar on forest fire prevention, land use and population was held in Greece in October and November 1991.

79. The ECE Timber Committee promotes the rapid international dissemination of reliable information on sudden and severe damage to forests in the ECE region, notably that caused by fire, wind, snow, and insect infestation, so as to reduce disruption of wood markets. The Committee also examines the implications of air pollution and other damage to forests for wood supply and markets by keeping under review possible consequences of damage to forests, and decides on action as necessary.

Q. Economic Commission for Latin America and the Caribbean

80. ECLAC does not undertake activities of direct concern to the Decade as part of its regular programme of work. However, during a recent regional conference (Cartagena, 20 to 27 April 1994) the member States adopted a resolution whereby they entrust the ECLAC secretariat with some responsibilities directly related to the Decade. It recommends that the ECLAC secretariat should undertake the systematic and quantitative research and analysis required for determining, in the shortest possible time the overall economic effects of disasters on all the countries of the region, as well as the possibility of reducing them through prevention and mitigation works and actions, and submit to the Governments of the region specific proposals for including disaster prevention and mitigation policies in national development plans, as part of the efforts relating to the International Decade for Natural Disaster Reduction. The meeting also recommends that the ECLAC secretariat should negotiate and obtain additional extrabudgetary resources in order to carry out these tasks.

R. Economic and Social Commission for Asia and the Pacific

81. ESCAP continues to be involved in promoting and enhancing cooperative efforts in the Asian and Pacific region to mitigate damage from typhoons/cyclones, floods, droughts and geologic disaster. The Natural Resources Division has been working to help the countries of the region to mitigate the effects of water-related disasters since the late 1940s, when it was known as the Bureau of Flood Control of ESCAFE (Economic and Social Commission for Asia and the Far East).

82. The Decade provided a fresh impetus to ESCAP and to its members and associate members for strengthening the efforts to reduce the increasingly serious disruptions and human and material losses caused by natural phenomena. At its forty-fifth session in 1989, the Commission adopted resolution 45/5 calling for the promotion and support of such cooperative efforts by the ESCAP secretariat, the affiliated Governments and concerned international organizations.

83. The Manual and Guidelines for Comprehensive Flood Loss Prevention and Management was published in 1991. This publication has been translated into Chinese and Korean by the respective Governments for wider dissemination. Since 1991 advisory missions on the application of the Manual and Guidelines have been fielded to China, Hong Kong, Iran (Islamic Republic of), the Lao People's Democratic Republic, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, the Republic of Korea, the Solomon Islands, Thailand and Viet Nam. An advisory

mission went to Viet Nam to provide advice on developing emergency preparedness and disaster management measures. Another mission provided advisory services to Vanuatu on flood protection and river management. In March 1994, an advisory mission was undertaken to Myanmar on water-related natural disaster reduction.

84. The secretariat has also continued to give substantive support to the ESCAP/WHO Typhoon Committee and the WMO/ESCAP Panel on Tropical Cyclones. Continuing cooperation and coordination has been maintained with the IDNDR secretariat.

85. In June 1993, ESCAP took part in the international Forum on Natural Hazards Mapping, hosted by the Geological Survey of Japan at Tsukuba, Japan, in which 16 countries participated. At this meeting, it was agreed to establish a project for a geohazards map of eastern Asia, under the auspices of ESCAP, and a cost-sharing arrangement between Japan and other donor agencies. The ultimate aim is the production of user-oriented large-scale maps that will show the various types of hazard- and risk-zones.

86. The ESCAP secretariat, through its UNDP-funded Regional Remote Sensing Programme (RRSP), has initiated a number of activities related to disaster monitoring and assessment in the region in recent years.

87. ESCAP has traditionally been involved in natural disaster reduction, and the Decade has provided a fresh impetus for work on mitigation of natural disasters. In line with the goals of the Decade, workshops, seminars, advisory missions have been organized on various aspects of natural disaster including preparation of guidelines and thematic maps. Work has been focused on water-related and geologic hazard reduction activities also involving application of space techniques in disaster warning and mitigation. Flood loss reduction in urban and rural areas has been given high priority in ESCAP's work. Project activities have also been undertaken on drought early warning and crop monitoring.

IV. ACTIVITIES OF OTHER DECADE PARTNERS

A. International Civil Defence Organization

88. The ICDO is an intergovernmental organization of 42 member States as of April 1994, with the objective of the promotion of civil protection world wide.

89. Taking into account the recommendations of the International Framework of Action, the organization, thanks to its direct relations with civil defence authorities in each member State, has intensified its action in the following domains:

(a) Information (ICDO Documentation Centre - International Civil Defence Journal in Arabic, English, French and Spanish);

(b) Training (ICDO International Training Courses - Geneva and Regional Centres);

(c) Technical assistance when requested (assistance programmes);

(d) Education and awareness of the public.

90. Implementation of the DHA mandate with regard to the coordination of all emergency actions, thus permitting the ICDO to play a full effective role within the International Decade.

B. International Federation of Red Cross and Red Crescent Societies

91. Reducing the effects of disasters, be they triggered by natural or man-made events, is a central part of the work of the Federation. It is explicitly referred to in two of the four goals of the Federation's Strategic Work Plan for the 90s. Natural disaster reduction is achieved through a variety of programmes, from community-based preparedness projects to international advocacy actions. This report describes some of the key approaches and achievements of the Federation.

92. The Federation's global disaster preparedness programme operates at three different levels: at the local grass-roots level, supporting the work of the Red Cross and Red Crescent Societies; at the Federation level, improving readiness and effectiveness for international disaster response; and with the international world outside of the Federation, lobbying for policies, approaches and funding directions which best serve the interests of the world's most disaster vulnerable people. In 1994 the Federation appealed for over Sw F 12 million to support National Society Preparedness activities around the globe.

93. The Library and Information Services Network project aims to develop standards for recording and organizing information and therefore facilitating its accessibility. The LISN project serves as a gateway to a variety of electronic sources of information, both inside and outside the Federation, and is a prime tool for building better preparedness.

94. In 1993 the Federation launched the World Disasters Report. The World Disasters Report is the only annual global report focusing on disasters, from earthquakes to epidemics, conflict to economic crisis, and the millions of people affected by them.

95. An informal consultation on the health aspects of the Decade was convened in November 1990 by the Health Department of the Federation. The outcome of the consultation set out a series of recommendations covering the development of First Aid, the development of training material, the strengthening of local health resources, and the building of better health information networks. In 1994, the Federation is seeking to spend some Sw F 24.6 million on health programmes world wide, most of which have disaster reduction as an integral part of their objectives.

C. International Telecommunication Union

96. ITU co-organized the Tampere (Finland) Conference on Disaster Communications, the major outcome of which was the Tampere Declaration. The main thrust of this Declaration was to undertake work towards the realization of a Convention on Disaster Communications. It was agreed that DHA would take the lead in initiating action to convene the parties that will discuss and put into being this Convention. ITU is prepared to assist in this process.

97. ITU has made a proposal for the stocking of a certain quantity of telecommunications equipment for emergency use. The Union has been seeking financing for such equipment. This proposal includes the possible provision of technical expertise by ITU.

98. The World Telecommunication Development Conference (Buenos Aires, 21-29 March 1994) adopted a resolution on disaster communications which, inter alia, instructs the Director of the Telecommunication Development Bureau of the ITU to help, within the framework of the Decade, those developing countries which are particularly prone to natural disasters, in the development of early-warning systems, using telecommunications (including broadcasting services) through the Special Voluntary Programme for technical cooperation, and requests the Secretary-General of the ITU to work closely with the Department of Humanitarian Affairs of the United Nations Secretariat with a view to increasing the Union's involvement in disaster communication.

D. Organisation for Economic Cooperation and Development

99. The Development Assistance Committee (DAC) of the OECD is a forum for its Members to coordinate their aid policies and to consult on the broader aspects of development policy, encompassing not only financial, economic, trade and structural issues, but also environmental aspects. A main concern of the DAC, through its Working Party on Development Assistance and Environment established in 1989, is the integration of environmental aspects into development assistance projects and programmes. To ensure that environmental considerations are effectively taken into account, the DAC has, inter alia, adopted a number of Guidelines on Aid and Environment, the most recent one being the DAC Guidelines on Disaster Mitigation (April 1994). They are intended to increase awareness among policy makers and task managers involved in development cooperation of the threats posed by natural hazards and of the range of measures that may be adopted so as to reduce the impacts of natural disasters on developing countries. DAC members have an important role to play in assisting developing countries to enhance their capacity to cope with natural hazards, as they possess considerable knowledge and experience in the field and can provide financial resources through their aid programmes, to promote the adoption of measures to mitigate the effect of disasters by both the public and private sectors in the recipient countries. The DAC Guidelines on Disaster Mitigation have been elaborated with the assistance of experts from member Governments, international organizations (including the Decade secretariat), universities and NGOs.

E. Organization of African Unity

100. The secretariat of the Organization of African Unity has performed a major role in sensitizing African Governments about the importance of natural disaster reduction since the start of the Decade. In pursuit of this objective, OAU organized a workshop of its member States on natural disasters in April 1992, which provided an important forum for addressing policy and practical issues of the Decade relevant to the continent. In November 1993, the OAU secretariat - in collaboration with ECA, the secretariat of the Decade and WHO - hosted a meeting for African experts to review the status of implementation of the objectives of the Decade. These deliberations led to the drafting of a document entitled the "African Common Position on IDNDR and the World Conference", which was endorsed, ad referendum, in January 1994 by the fifty-ninth session of the Council of Ministers of OAU.

101. The OAU secretariat continued its close cooperation with the Decade secretariat in the preparations leading to, and during, the Yokohama Conference. By its recent resolution at the 60th Meeting of its Council of Ministers, in Tunisia in June 1994, OAU endorsed the Yokohama Strategy for a Safer World. The OAU secretariat is required, by the same resolution, to cooperate with the Decade secretariat and ECA in organizing appropriate workshops to help African States implement the above strategy and report to the Council of Ministers in June 1995.

F. Association of South-East Asian Nations

102. ASEAN regional collaboration in matters connected with natural disasters comes under the purview of the ASEAN Experts Group on Disaster Management (previously known as the ASEAN Experts Group on Natural Disasters) whose mission is "to enhance regional cooperation in all aspects of disaster management, including prevention, mitigation, preparedness, response and recovery, through more effective mutual assistance activities, in order to minimize the adverse consequences of disasters on economic and social development in member countries". The Expert Group meets once every two years and has had eight meetings since its establishment in 1975. The Decade was discussed at two previous meetings of the Experts Group. At its 8th meeting held at Langkawi from 9 to 11 August 1993, the Experts Group agreed that each ASEAN member country would commemorate IDNDR Day on the second Wednesday of October each year and to issue a joint statement on IDNDR Day in 1994 (13 October 1994) through the Chairman of the Experts Group.

G. South Asian Association for Regional Cooperation secretariat

103. Heads of State or Governments at the third SAARC Summit at Kathmandu (November 1987) expressed deep concern at the fast and continuing degradation of the environment and suffering caused by natural disasters. They decided to intensify regional cooperation and to commission a study on the causes and consequences of natural disasters and the protection and preservation of the environment. At the Fourth SAARC Summit at Islamabad (December 1988), the Heads

of State or Governments decided that a joint study be undertaken on the Greenhouse Effect and its Impact on the Region.

104. The recommendations of the above regional studies were considered by the Technical Committee on Environment, during its first meeting, and measures were identified from among the recommendations, for immediate action, and decisions were made on a number of modalities for their implementation by member States. The modalities decided upon include improving climate monitoring capability through networking arrangement and through SAARC Meteorological Research Centre (SMRC); developing climate change and sealevel rise scenarios through country-specific studies, and the sharing of information data in this respect; making available to member States expertise on climate research and monitoring greenhouse gas emissions; identification of training and research institutions and ongoing programmes; exchange of information and data; exchange of experience on strategies for responses to climate change.

105. The SAARC Council of Ministers at its Thirteenth Session in Dhaka (4-5 December 1993) welcomed the offer by the Government of India to host a Workshop in order to formulate a collective position by SAARC countries on the issues to be discussed at the World Conference on Natural Disaster Reduction in Japan in May 1994. Pursuant to the above decisions, the Government of India hosted the Workshop in New Delhi on 30 March-2 April 1994 which was attended by experts from all member States and the concerned Director of the SAARC secretariat. The report of the Workshop and the collective position were utilized by the delegations of the member States at the World Conference on Natural Disaster Reduction.

H. Volunteers in Technical Assistance

106. Since early 1991, Volunteers in Technical Assistance (VITA) has managed a cooperative agreement, supported by the United States Office of Foreign Disaster Assistance, to develop innovative disaster reduction initiatives in cooperation with multinational and local private sector corporations. VITA has implemented programmes directly related to the objectives of the IDNDR.

107. Disaster preparedness training and advocacy training in the VITA programme facilitated the provision of United States expertise for disaster preparedness planning and specialized training in the following countries: Grenada, Colombia, Thailand, Philippines, India. The programme has also supported the development of disaster preparedness committees among Chambers of Commerce in Brazil, Ecuador and the Philippines. In addition, the programme has supported a very successful Caribbean Private Sector Disaster Coordinating Committee comprised of regional government, private, and voluntary agency membership. VITA also supported a feasibility study to promote a public education/community outreach programme for disaster preparedness in the vulnerable delta areas of Bangladesh. At the request of the Decade secretariat, VITA has organized a private sector group to support the Decade's World Conference in Yokohama in May 1994 to promote the private sector disaster preparedness, mitigation and prevention agenda during the Conference.

108. For the remainder of the Decade, VITA recommends that the United Nations system, including the Decade secretariat, take the following actions: encourage private sector, Government and NGO collaboration at the local level; support the use of appropriate information and telecommunications technology in disaster prone countries; and encourage the donor community to support disaster reduction programmes.

109. Concerning organizational arrangements during the Decade, with appropriate support from bilateral, multilateral and private sector donors, VITA could assist the United Nations system in adapting its low-cost ground and satellite technology for early warning, preparedness and response programmes in disaster prone countries.

V. ACTIVITIES OF SCIENTIFIC AND TECHNICAL ASSOCIATIONS

110. In 1990 the General Committee of the International Council of Scientific Unions (ICSU), set up a Special Committee for the Decade to provide advice to the members of ICSU on the harmonization and coordination of their efforts to reduce the human impacts of natural disasters and to organize a vigorous and effective ICSU contribution to the Decade. Since then the Special Committee has formulated integrated policies for the Decade at three meetings, held in January 1992 (Paris), August 1992 (Pasadena) and February 1993 (Moscow). Under those policies, education and training activities, as well as six Decade-related projects on tropical cyclone, volcano and earthquake hazards, famine, megacity protection and Lake Nyos-type hazards have been implemented by ICSU and its members, or jointly with United Nations organizations. All projects are making good progress and four have also been endorsed as demonstration projects by the Scientific and Technical Committee.

111. In 1992, the International Association for Earthquake Engineering founded the World Seismic Safety Initiative, a long-term international cooperative scheme that will advance and spread earthquake engineering knowledge world wide. That initiative was endorsed by delegates to the tenth World Conference on Earthquake Engineering, held at Madrid in July 1992, and by the Scientific and Technical Committee in 1993 as an international project for the Decade. A first workshop on seismic risk management for countries of the Asia and Pacific region was held at Bangkok and was attended by 30 participants from 19 countries. For the World Conference on Natural Disaster Reduction, ICSU organized the Technical Committee on Hazard Resistance Structures, with contributions from the World Federation of Engineering Organizations (WFEO) and of the Union of International Technical Associations (UITA).